

April 2017 Safety Focus

VERTICAL, HORIZONTAL AND COMBINATION

Chemical Fume Hood Types





PARTS OF THE CHEMICAL FUNE HOOD Side view





WHEN MUST I SHUT THE SASH?

- Every time you are finished working in the hood.
 - Leaving for the day
 - Going to Lunch
 - Working at your desk while running an experiment.



WHY SHOULD I SHUT THE SASH?

SAFETY

- <u>Personal Safety</u> Keeping the sash lowered while working in the hood helps protect you from splash or explosion.
- If a fire should start in your hood the sash will help contain the fire.
- <u>Safety of others</u> Keeping the sash lowered increases the safety of those who are working around you.

Energy Efficiency

- Health and Safety has the ability to monitor each hood's usage and level of efficiency.



WHAT DO OTHER UNIVERSITY WEBSITES SAY ABOUT EFFICIENCY: SHUT THE SASH..

- Johns Hopkins A fume hood consumes 3.5 times the amount of energy consumed by the average house • One simple action can make the difference between a wasteful lab and a responsible lab: CLOSE THE SASH!
- Cal Tech Shut your sash! A variable volume fume hood is 60% more energy effective when the sash is down when not in use • One fume hood uses as much energy as 3 typical American homes
- Stanford University Fume hoods are big energy hogs because they use so much conditioned air. When the fume hoods are not in use but left open, a tremendous amount of energy is wasted by the conditioned air flowing through the hoods and out of the building.
- University of Notre Dame Keeping just one variable air volume hood closed when not in use rather than leaving it open all the time saves \$1,000 a year and is equivalent to taking 3 cars off the road.
- Pennsylvania State University With several hundred fume hoods at Penn State, we could save \$250,000 to \$500,000 in energy costs if the sashes are closed when the fume hoods are not being used. Is it as simple as it seems? No! Need to view the hood as part of the room's HVAC system







PROPER PLACEMENT FOR SMALL MATERIALS





WHAT IS THE EMERGENCY EXHAUST BUTTON?

This button will force the hood to exhaust 200% more air from the space.



Press the Emergency Exhaust:

- 1. If you have a chemical spill giving off noxious fumes
- 2. When there is a fire within the hood



PROPER WORK POSITION - SASH 18 INCHES





KEY POINTS

- Laboratory Chemical Hoods are integral safety devices that protect user and other lab occupants from exposures to toxic, offensive, or flammable materials.
- Always wear your personal protective equipment. Lab coat, gloves, safety glasses and closed toe shoes.
- Check your hood and alarm prior to each use.
- Keep lab chemical hood and adjacent work areas free of clutter. Keep paper away from exhaust ducts and baffles because they can cause blockages and diminish the air flow.
- Always be familiar with the chemicals you are using in the hood and be aware of their dangers, whether they are toxic, oxidizing, flammable, or pyrophoric.
- Never put your head into a chemical fume hood.









SHUT YOUR SASH!!! MAKE IT A SAFER DAY FOR EVERYONE!

