

With the Ductless Fume Hoods The Best Choices

There are a number of different types of laboratory fume hoods, but the most common kind is the self-contained ductless hood, which is also known as a carbon-filtered enclosure or a filtered fume hood. Carbon-filtered enclosures are a common term for them. This kind of fume hood is less expensive to install than traditional models since no ductwork is required. Consequently, when they first learn about them, many people assume that making a choice between them is an easy one.

Not That Fast

Before making a final decision on purchasing a [Ductless Fume Hoods by Global Lab Supply](#), there are a few important elements to consider. Whether you want to know for sure if your laboratory needs a ductless fume hood, you need to pay attention to the following four factors:

You may be wondering, "Is this kind of fume hood appropriate for my general application?"

There are several types of ductless as well as filtered fume hoods, however some hoods can still limit the activities that may be carried out inside of them. If you're looking for something light-duty or the process-specific, you may want to look elsewhere. However, it is vital to keep in mind that the filter life of a filtered fume hood decreases as the chemical concentration in the hood increases.

It is often the best option if your application doesn't meet these requirements to use a duct hood. Using a ducted fume hood is preferable if you have a long list of chemicals to apply or if you are unsure of what compounds may be used in the future.

At this point, you should speak with a Fume Hood Specialist about your application in order to establish which kind of fume hood is the most highly recommended.

Secondly, can the carbon filters now on the market effectively remove the substances that will be employed in your application?

The Filtered Fume Hood, a ductless fume hood, using Neutrodine Filters. In most circumstances, ductless hoods will have chemically specialised filters attached to the interior of them. Ducted hoods, on the other hand, may not be a feasible solution for certain chemical families, and they may not be effective enough to be cost-effective for others. To better capture distinct chemical families, several filter designs have been developed. However, filtered fume hoods are not able to remove all contaminants (low molecular weight solvents) from the air. An acid-base-solvent-filtering fume hood is all that is needed to remove these hazardous substances from the air.

An organic carbon filter contains activated carbon for the chemical adsorption of organic vapours.

It is a kind of impregnated carbon that can neutralise acids and sulphur-containing compounds, such as sulphur dioxide.

Impregnated carbon is used to neutralise ammonia and amine compounds.

Formaldehyde The Carbon Filter is made of impregnated carbon that neutralises formaldehyde

These are the components of the Mixed Bed Carbon Filter. Ammonia and amine compounds account for 20%, while formaldehyde-containing chemicals account for another 20%, while organics account for 40% of the 60 percent impregnated carbon.

Carbon impregnated with radioisotopes neutralisation

Both our Echo Filtered fume hoods and our Airo Filtered fume hoods employ Neutrodine Carbon Filters, which are the same filter type.

In general, if all of the chemicals in your application fall into one of these filter types, you may use a ductless fume hood in your application; however, there are certain exceptions to each filter type. A ductless fume hood may be used if all of the compounds in your application are compatible with one of these filter types. When it comes to methanol, for example, the organic filter is unable to adsorb it since it is very volatile, light in weight, and cannot be adsorbed. Perchloric acid, on the other hand, poses a distinct set of hazards and should only be handled in a fume hood developed expressly for this use.

Chemical Specialists can help you determine whether or not the filters on the market are acceptable for your chemicals by conducting a Chemical Assessment. Your application will be evaluated by them in order to help you decide whether or not it is appropriate, and they will make ideas for suitable equipment and filters, and they will tell you about any important precautions.

How frequently will you have to update your filtering system?

It's not necessary to spend extra money on ducting or wiring, but you should still think about how frequently you'll need to change your filters and the maintenance expenses that go along with it to figure out how much your yearly filter costs will be. Think about how often you'll need to replace your filters to get a sense of how often you should change them. Filter life expectancies vary from a few months to two years, depending on the model.