Experts in air filtration for the protection of laboratory personnel since 1968

Case Study: Harvard University

PROJECT PROFILE:

Type:
Renovation

Location:
Lyman Hall
Cambridge, MA

Filtered Fume Hoods:
(1) AMS Green Solution Hood featuring Erlab's GreenFumeHood Technology

Statistics:
Completion Date: May 2014

Architect:
Wilson architects

Construction Manager:
Shawmut Construction

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THE SCOPE

Harvard University's Lyman Laboratory of Physics required an additional fume hood to support their research of ultracold atoms and quantum physics. This groundbreaking research provides insights into new materials that will advance supercomputing and magnetic storage technologies.

THE CHALLENGE

Adding a fume hood to an existing lab is always a challenging process. When that lab is located in the basement of an older building, the challenges increase significantly. With limited space, resources, and no available ductwork it was determined that a traditional ducted fume hood was not an option. A low-flow fume hood, offered at no cost, was refused by the EH&S department because the low face velocity did not comply with their standards. The fume hood they need for this type of research must have the ability to handle a large volume of solvents, acids, bases and particulates simultaneously, while easily integrating into the lab, needing no ductwork, meeting face velocity standards, containing an advanced breakthrough detection system and a BACnet® communications option to remotely monitor the hood status.

THE SOLUTION

The answer was a 4-foot Green Solution Hood from Air Master Systems featuring Erlab's GreenFumeHood Technology - a superior molecular filtration technology that utilizes pre-filtration and enhanced patented molecular filters known as Neutrodine™ within the uniquely designed filter housing. The Green Solution Hood is also equipped with an acid storage cabinet and HEPA filtration. Automatic detection of chemical filter breakthrough provides continuous user safety.

THE RESULT

The hood was easily installed in the lab and met all of the criteria needed for the application for less total first costs than a ducted hood solution. Additional benefits include:

- No impact on the existing mechanical systems (supply or exhaust),
- Avoided costly ductwork modifications,
- Energy savings exceed filter replacement costs.

Erlab's state of the art Research & Development Laboratory relying exclusively on filtration

North America
+1 800-964-4434 | captairsales@erlab.com

China
+86 (0) 512 5781 4085 | sales.china@erlab.com.cn

France
+33 (0) 2 32 09 55 80 | ventes@erlab.net

Germany
0800 330 47 31 | verkauf@erlab.net

Italy
+39 (0) 2 89 00 771 | vendite@erlab.net

Malaysia
+60 (0) 7 3 555 724 | erlab@tm.net.my

Spain
+34 93 673 24 74 | ventas@erlab.net

United Kingdom
+44 (0) 1722 341 940 | salesuk@erlab.net

www.erlab.com

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About Erlab

We provide safety, we protect your health
Erlab invented the ductless fume hood in 1968. With more than 45 years of experience in the field of chemical filtration and protection of laboratory personnel; we know the formula for safety. With Erlab, you will never have to wonder or worry if our products are safe. We build each one of the following 7 ingredients into our products, and without all of them, your health and safety will be compromised.

1 Erlab R&D Laboratory
The engineers and chemists in our state-of-the-art R&D laboratory understand molecular filtration. We are committed to designing products that are safe and of the highest quality, strive to improve our products, and continuously develop new products that provide greater protection in the laboratory.

2 Strict Safety Standards
We hold ourselves to the highest standard and adhere to the strict AFNOR NF X 15-211: 2009 filtration safety standard as recognized by ANSI Z9.5-2012.

3 A Published Chemical Listing
It all begins here. Without this listing, we are not compliant with AFNOR NFX 15-211. Our in-house laboratory tests and independent testing verifies the retention capacity of over 700 chemicals for our filters.

4 Independent Testing
Erlab filters have been independently tested multiple times at various concentrations guaranteeing that our safety solutions all adhere to the strict performance criteria of the AFNOR NF X 15-211:2009 standard assuring that the emissions concentration at the filter exhaust will always be lower than 1% of the TLV.

5 Application Questionnaire
Our laboratory specialists will recommend the appropriate filtration fume hood, type of filter, and personalized advice.

6 Certificate of Validation for the chemicals used in the hood
A certified PhD chemist issues a Certificate of Validation with a list of the chemicals approved for use in the hood.

7 Our Safety Program
We back up our products 100%. This program includes your specialized chemical evaluation, validation of your hood upon installation, and your filtration safety specialist that ensures your hood is operating to its full potential.