

LAWRENCE FACTOR®

High Purity At High Pressure

**ONLY TAKES
3 MINUTES!**

Safe Air Systems, Inc. has been a dealer for Lawrence Factor for nearly two decades. We stock a wide variety of X-pendable cartridges in our warehouse and can generally ship to you same day. We offer Air Quality Testing through Lawrence Factor's X-zam Laboratories. Many testing programs are available to suit your needs.

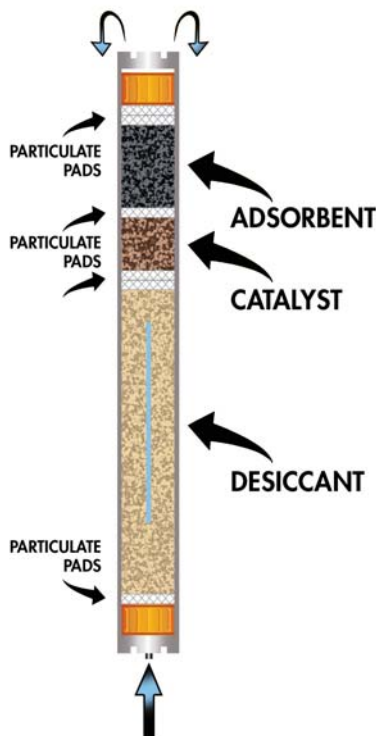


Air Test Kit Components

WHO IS LAWRENCE FACTOR?

The origins of Lawrence Factor are rooted deeply in the field of high-pressure gases, founded in 1979 with the FLASK refillable filter cartridge for Scuba diving. Since that time, and through decades of technical advancement, L-Factor has become one of the most recognized names in breathing-air. L-Factor purification products are found in a multitude of applications...to name a few:

in CNGV refueling stations, in aeronautical/space exploration, in scientific laboratories, in missile guidance systems. Still, whenever you see a breathing mask, be it in a hazardous environment, entering the scene of a fire, or plunging deep beneath the sea...think Lawrence Factor, the company that puts PURE breathing air into that mask.



X-PENDABLE CARTRIDGES

If your requirements involve Hi-PSI air on inert gases, L-Factor™ "once through" X-pendable® filters are highly effective. X-pendable® are recognized worldwide as the premier filter cartridge. Precision engineered and charged with laboratory formulated purifying media, our filters are designed for optimum removal of contaminants.

Inside is a carefully balanced mixture of adsorbents such as Vaporshell™ for moisture removal or activated carbon to eliminate oil vapors, and a micronic filter element for pre-filtering of fine dust and grit. By activation, the desiccants can hold up to 22% of their own weight in water vapors. This enables us to drop dewpoints as low as - 100°F. In all, L-Factor™ has developed, blended and activated more than 16 species of adsorbents and catalysts which are used in X-pendable® Cartridges. In some cases, particularly for specialized applications, a filtering agent may be specially treated to enhance effectiveness. Hundreds of X-pendable® models are available. This translates into the ideal filter cartridge designed for unusual applications and experimental sites or simply to better enhance a standard application.

GETTING THE BEST PERFORMANCE OUT OF X-PENDABLE CARTRIDGES

- All cartridges in the system must be replaced together as a set.
- Do not swap used cartridges from one tower to another.
- Avoid contamination of the downstream system and lines by replacing the cartridges before they are spent.
- Maximum cartridge life once installed is six months regardless if it has not reached the full processing capacity.

RELIABLE SHELF LIFE

X-pendable® cartridges come with a guaranteed 2-year shelf life so long as the airtight wrapper has not been opened. If you are in doubt about the manufacture date, contact Safe Air Systems, Inc to determine remaining shelf life. Reliability and freshness of the cartridge should be questioned after this date.

GOOD FILTRATION PRACTICES

No matter what quality filter cartridge that you are using, proper system maintenance, operating environment and scheduled filter changes will dictate the results and longevity of your cartridges. The most common cause of poor air/gas quality is to exceed the useful life of the cartridges.

1. The lower you keep the operating temperature of your filter system, the greater the lifespan you can expect between cartridge changes.
2. Efficient coalescer ahead of the cartridge system will add to filter life. Since coalescers are available in many efficiency ratings (from 50% to 99.9%) the ability of this equipment to eliminate condensables before entering the cartridge is an obvious part of the longevity puzzle.
3. Variations in pressures and flows will have a definitive bearing on cartridge performance. A priority valve at the discharge from your purification system is a must. This will maintain a minimum pressure (i.e. 2000 PSI) within the system. In certain cases, a flow governor will be indicated as well.
4. The correct choice in cartridges is naturally an important factor. Even if your system is marked for certain cartridges, these are usually chosen by the original equipment manufacturer for typical conditions and average uses.
5. A good quality control program for the product you are making (and purified air/gas is a product) should be implemented. This would include keeping of log books, scheduled maintenance, frequent cartridge changes and frequent testing of the air/gas for purity assurance.

AIR QUALITY TESTING

Safe Air Systems, Inc. provides air quality testing that is simple to administer with results returning within a week. All components of the test are shipped to you via UPS and return labels are supplied with each kit to facilitate easy return to the lab. If at anytime, your sample does not pass, we will ship you a retest kit immediately at no extra charge and have one of our service technicians call to troubleshoot the cause of the failed test.

Safe Air Systems offers a variety of programs. Monthly, Quarterly, Semi-Annual and Single air test programs can be purchased. All grades of air testing are available including military specs.

AIR QUALITY TESTING - CONT'D


We can even have a service tech come to your facility and pull each test!

NFPA 1989 *2008 standards state that quarterly samples must be taken. Also, that one air sample shall be taken before changing the purification components and a second must be taken after the components are changed. If you so desire Safe Air Systems will make sure that the transition to these new standards goes smoothly and effectively.

DO NOT EXCEED 2500 PSI

STEP 1: Inspect bottle for any damage.


STEP 2: Select one of the adapters provided & screw it into the quick adapter (use the end with the #6 boss connection).



NOTE: If using a LOW PRESSURE application, 40 psi is the minimum allowable pressure. Anything under that is considered empty.

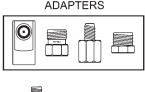
IMPORTANT: This needs to be done before step 3 to prevent sample contamination. The sample test kit is under vacuum.

STEP 3: Connect assembly to your air source and connect to bottle.

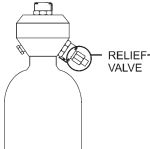


STEP 4: Begin flowing sample through sample bottle for 3 minutes.

ADAPTERS



QUICK ADAPTER



RELIEF VALVE

IMPORTANT: A hissing sound will be heard during use of this apparatus. This sound is due to self regulating devices which vent excess air.

STEP 5: Disconnect the sample bottle from your source.

IMPORTANT: This step is crucial to preserve air sample.

STEP 6: Turn off the air source and remove adapter.

STEP 7: REMOVE "WHITE" RELIEF VALVE ONCE TEST IS COMPLETED AND PLACE BACK INTO BOX.

STEP 8: Fill out the sample information sheet & place it back in the box together with all adapters provided in the sample kit. Place return address label on box to return the sample test kit.

IMPORTANT: Replace all adapters & relief valve back into their original packaging to prevent any damage during shipping.

DO NOT ALTER THE SAMPLE CYLINDER IN ANY WAY. IT MAY CAUSE SERIOUS INJURY.

ONLY TAKES
3 MINUTES!

Sign up today to get started
on one of our programs!
Contact Safe Air Systems
at 800.424.8633
or email us at
airtest@safearsystems.com.

X-ZAM LABS

To maintain the integrity of your air/gas production, as in making any kind of product, you're wise to adhere to a quality assurance program. As a part of that program – especially in the case of critically pure gases – it's prudent to include analysis of the result gas. You'll want to employ a third party lab to perform these unbiased analysis. A lab that uses precise scientific methods. One that's accredited by an international agency. One with agents across the globe. One such as X-zam[®] Labs at Lawrence Factor.

X-zam Laboratories 

Using precision methodology, X-zam Labs carefully analyzes many types of inert air/gas specimens to search out even the smallest traces of undesirable contaminants. Undetected, these pollutants can have far-reaching or disastrous consequence: disabling illness, inoperative equipment, or simply ineffectual product. The reasons for accurate analysis are endless. You may simply be driven to comply with safety standards set by agencies such as the NFPA or OSHA.

With X-zam Labs, collecting a specimen is easy – you can do-it-yourself or one of our local agents can be enlisted to pay a house visit. The lab provides everything needed in our patented sampling kit, which is loaned to you at no charge. Trapping the specimen couldn't be simpler because our kit acts just like the cylinders you're already accustomed to filling – there are no complicated vials or gadgets. Tests can be conducted on a one-time basis or you may enroll in one of our programs where specimens are analyzed on a regular schedule. Or – if you analyze large numbers of specimens – there is the option to electronically submit your sample via our immediate response instrument: the Lab On Locale.

In the field of purified gases – no other firm matches the resources and qualifications of Lawrence Factor. With our purification expertise and technical support – X-zam Labs has a distinct advantage in analyzing compressed air/gas.

X-ZAM LABS - QUESTION & ANSWER

What is X-zam A division of Lawrence Factor[™] skilled at searching out and reporting the constituents of most compressed gases. Only reliable scientific procedures are used which result in very accurate analysis. X-zam Labs are so proficient that they qualify for accreditation under the standards of ISO 17025 by the American Association of Laboratory Accreditation (A2LA). This accreditation is also recognized by Asia Pacific Laboratory Accreditation Cooperation (APLAC), European Cooperation (EA), Inter-American Accreditation Cooperation (IAAC), and the International Accreditation Cooperation (ILAC).

Why should I have my gas analyzed by X-zam Labs? The reasons are varied – but in most cases it has to do with quality control of a compressed air/gas product. In some cases a regulation is requiring you to perform regular analysis on your system. This is common for breathing air. In other cases you may be trying to locate a source of contamination in an air/gas system and X-zam is a perfect troubleshooting tool. In any case, it's just a matter of good sense to assure yourself, your staff, and your clients that your system is performing as it should.

What does X-zam Labs test for? Often the motive for testing varies and so do the substances we look for. Some of the common constituents are oxygen, water vapor, carbon monoxide, hydrocarbons, oil vapors, particulate matter, halogenated solvents, and carbon dioxide. We also report unknown substances when they appear.

How often should I use X-zam Labs? It depends on the purpose and usage of your air/gas system. You can order a one-time analysis, as well as a pre-scheduled program for weekly, monthly, or quarterly testing. Safe Air will be happy to help you identify a program to best meet your needs.

What Do I Get From X-zam? Confidence and security in knowing that your air/gas system is being monitored by a team of experts. We'll help you every step of the way – if and when there is a problem. More than that, each time we perform a X-zam analysis you'll receive complete back-up documentation; including a handsome certificate that you'll be proud to display and technical report showing all the analysis and the standard they're measured against.

Please contact us for our full line of Lawrence Factor products.