



The Homeowner's Guide to Indoor Air Quality



Hello, and thanks for taking the time to visit our site and download our eBook!

With a rising concern in our society for the quality of the air you breathe in your home, we have found that many of our customers are not informed on the subject but are curious to learn more. So much misinformation is in the marketplace; it's important to research your options for making an investment! With allergy and breathing issues at an all-time high, it's important you ensure that you and your family are living and playing in a clean and healthy environment.

We've attempted to answer some of the common questions and address common issues by breaking information down into the following areas:

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We hope this helps educate you and answers a lot of your questions. If you have more, please email office@kalosflorida.com or visit our blog at kalosflorida.com/resources/blog!

Indoor Air Quality: What is it and Why Should You Care?

At Kalos Services, we are seeing a record number of our friends and neighbors buying Indoor Air Quality products. Indoor Air Quality (IAQ) products are usually an easy up-sell for HVAC contractors, but few consumers know exactly why they are purchasing them.

We advise every consumer to carefully consider their needs and expectations before purchasing an IAQ product. Consider if you have any allergies, immune deficiencies, or odor sensitivities. If you have none, then IAQ add-on products may not be for you. There is no IAQ product that will substantially reduce the need for regular housekeeping, as often the heavier dirt and dust will never make it through the unit in substantial enough quantities to be filtered out anyway.

Many times IAQ products can be very large and costly to install and maintain. Depending on your priorities, they may or may not represent a good value. It is critical that you understand what the ongoing costs are associated with the maintenance of a particular IAQ product.

Here's a quick list of three questions to ask the HVAC salesman or technician that is giving you an overview on prices and system types.

1. How often do bulbs, filters, or cartridges need to be replaced, and what do they cost when they do?
2. Are you required to buy these products through the installing contractor, or can they be purchased elsewhere?
3. Can the maintenance be done by you, the owner, or does regular maintenance require a professional?

Air Filters and Their Effect on Air Quality

The kind of air filter you buy can make a huge difference on the indoor air quality in your home. You should be aware of a few things when planning how to maintain and choose the correct filter for your home or business air conditioning system. Here are three things to know about filters when choosing them.

1. **Correct Sizing:** Using the correct-sized filter for your return is essential when selecting your air filter. Your filter is meant to protect your air conditioning equipment, not just you. Under-sizing a filter can result in the air flow bypassing your filter, dropping dog hair and dust on the expensive, heat-exchanging coil instead of on the filter. The components of your system would suffer the consequences and essentially waste the money you spent on an air filter. It might result in higher energy bills and even damage or clog up expensive equipment. If you are under-sizing, the dust and debris that you see on your filter every month may be only a part of what is traveling through the air system in your home.
2. **Changing intervals:** There is a common myth sold to homeowners concerning the infamous "30-Day Air Filter" vs. "90-day Air Filter" battle. As filters pull things out of the air, they block your air more and more, making your equipment work harder even while keeping it from cooling the house well! Running your system with a dirty filter can make your costs skyrocket. The reality is each home has different conditions within it, and those conditions will affect how much is in the

air for the filter to remove. If you have pets, or if your kids are going in and out of the house all day, your filters are probably not going to last as long as the box says. There are options for those who do want a filter that will last longer than 30 days, the most common being purchasing a system that uses a larger filter, but they often aren't cheap. Go to our indoor air quality page for some information on these types of systems. Lower air flows due to a dirty filter can decrease capacity and consequently the energy efficiency ratio or performance factor of the system, and they can increase your heating and cooling cost. A filter should be periodically checked and replaced when needed, not just every 30 days!

- 3. MERV Rating:** MERV is a measurement scale designed in 1987 by the American Society of Heating, Refrigerating and Air-Conditioning Engineers to rate the effectiveness of air filters in indoor air quality. MERV stands for Minimum Efficiency Reporting Value, and you can check out a chart in a previous post if you want to know what the numbers mean. In general, filters with a higher MERV rating need to be changed more often, since they pick more contaminants out of the air — but that's why you want them, because they get more out of the air! Another factor to consider is the air filter's thickness. For example, a MERV 8 pleated 1" filter doesn't filter any better than a MERV 8 pleated 4" filter, but the 4" filter will last longer because of the increased surface area compared to the 1" filter.

All this being said, it's essential that you consistently change your air filter. Let's be honest: we all forget to do it sometimes. That's why we've created "Kalos Reminders," an awesome monthly reminder to check your filter to see if it needs changing.

Sign up here so you never forget to change your filter again: ([link here](#))

What Products and Services Should You Consider?

IAQ products can usually be categorized by three different functions:

- a. Particle capture (filtrations)
- b. Live organism neutralization
- c. Active purification (hydroperoxides)

Here are the three best options for Indoor Air Quality products:

1. *Air purifiers* - There are many products on the market that can be billed as "air purifiers." The first question that should be asked is, does this purifier clean all of the air that passes through the system or just a certain area? What type of technology or combination of technologies are being used to purify the air? Are there any significant byproducts of the air purification process such as ozone that could be a respiratory irritant?

These purifiers use the following process:

- a. Precision point ionization charges particles as they enter the purifier.
- b. A specially designed, continuously charged media captures airborne particles.
- c. Patented, state-of-the-art technology kills captured viruses, bacteria, and mold. This can also prevent further growth of bacteria and fungi on the filter.

This is not an absolute cure-all for air purification, and it is still primarily targeted towards particle capture. The average yearly maintenance cost for these units is about \$150.00.

2. *UV lights* - These are generally used to bathe the interior of the fan coil unit (indoor unit) with ultraviolet light. This helps to prevent the growth of bacteria and fungi inside the unit and nominally decrease the live bacteria and fungi counts within the air itself. It is very important that UV lights be installed according to the manufacturer's literature to get the desired result.
3. *Photoionization* - Products such as the RGF REME (also known as AirKnight) use light to create hydroperoxide ions that travel into the air stream and bond with particles in the air to neutralize them and make them heavier than air. This type of technology has been shown to be especially effective at reducing odors. The yearly maintenance cost on these products is generally less due to the fact that cartridges only need to be replaced every few years.

How to Find a Reputable HVAC Contractor

When installing a new Indoor Air Quality system, the HVAC contractor whom you work with is just as, if not more, important than the brand of the actual equipment being installed. Most HVAC companies heavily market the products they sell with money given to them by manufacturers and don't have a lot to show for their own craftsmanship and trade skills. Here's a three-step process to find a reputable company.

Step 1: Know what signs to look for.

1. Look for companies with a reputation and track record that back up their claims and experience. Ask for specific references for customers you can speak to whom the contractor has installed similar IAQ equipment for.
2. Look for contractors with a wealth of experience and training regarding the product they are installing.
3. Check out the website of the product that the contractor is proposing. Check the dealer locator in your area for that product. If the company you are dealing with does not show up somewhere on the manufacturer's dealer locator, they likely do not have a lot of experience with the product.
4. Most HVAC contractors fail within the first few years of starting out. For this reason, it is generally wise to find companies that have been in business for over five years whenever possible.

Step 2: Before you contact a contractor, check all of the following items:

1. Check for up-to-date and proper state licenses and certification. Read our blog for how to do this in about five minutes to ensure you're protected: <http://blog.kalosflorida.com/2013/08/is-your-florida-air-conditioning-contractor-licensed/>
2. See if the company is accredited with the Better Business Bureau. Visit their website to look up any contractor's company name: <http://www.bbb.org/us/Find-Business-Reviews/>
3. Look for companies that employ NATE-certified HVAC technicians. NATE-certified technicians are skilled professionals who have proven their knowledge in the HVAC/R industry by passing specialized NATE certification tests. <http://hvacradvice.com/maps/locator.aspx>

4. Read reviews from customers; this gives you an accurate portrayal of how the company operates. Remember, no company is perfect, but see how they respond when they make a mistake. Here are some great sites for reviews:
 - a. *Angie's List*: Angie's List is a paid subscription service, but it provides a very reliable community of honest reviews by real people. (www.angieslist.com)
 - b. *Google+*: This is Google's social media channel, and a reputable company's profile should show when you perform a Google search for their name. Check out some honest reviews and the rating Google gives on a 1 to 5 star basis.
 - c. *Other sites*: Reviews can also be found on sites like Yelp.com, MerchantCircle.com, or a company's Facebook profile page or website.

Step 3: The Interview. Time to make a phone call.

Ask any potential contractor hard questions. Look for honest answers that show an interest in doing the right thing for the customer even when it hurts their wallet. Here are some great examples of questions they should be willing to answer for you.

1. What is the biggest refund you have ever given a customer? Why did you need to give a refund?
 - Look for specific instances and honest answers. Every company, if they've been in business long enough, has made a large mistake at some point.
2. May I see your written installation process?
 - Have them email it to you.
3. What separates you from your competition?
 - Top three answers you will most likely hear: Honesty, Quality, and Experience.
4. What is your after-hours warranty service policy? Are you willing to put it in writing?
 - Many companies tout 24-hour service. Most do not follow through. Get the policy in writing so you can hold them accountable in case of an emergency service need.
5. What is the biggest mistake you have made as a company?
 - This is where you can test a company's claim of honesty.

Ensuring You Get a Fair Price

The best way to ensure that you are getting the most for your money is to know what you expect and choose a company that has a track record of delivering satisfaction. Keep in mind that many companies in the home service business do not look carefully at their records to ensure that their pricing is both consistent and profitable. A price written on a business card may look good until the installer comes back to you for more



money for work that is needed beyond what was quoted. If you can find a company that has good customer reviews online, a strong track record, upfront and professional employees, and a price that is competitive with other reputable companies, you will likely receive a good value in the long term.

Five tips for getting a great value:

1. Look for the reputation of the contractor more than the brand.
2. Ask for an AHRI certificate for the system being proposed.
3. Ask tough questions about the company such as, can I see your written installation process?
4. Make sure the proposal is clear and detailed, get any questions answered and changes made before you sign, and always hold a copy of the proposal for review during the installation.
5. If at any point when dealing with a contractor you feel uncomfortable with their honesty, professionalism, or expertise, do not use them regardless of what may look like a good price.

Frequently Asked Questions

How long will a new install take?

Most fully staffed HVAC contractors will finish an HVAC replacement in one day to try and prevent you from being without air overnight.

Should I consider a DIY A/C installer or a licensed contractor?

We would strongly suggest using only a licensed and insured contractor. There are many aspects of an HVAC installation that involve personal safety, fire hazards, indoor air quality, system longevity, and long-term power usage. While using a licensed professional does not eliminate the possibility of issues, it provides you a legal recourse if problems do occur. Licensed contractors in the state of Florida are required to carry Liability and Workers Compensation Insurance so that you will not be liable if damage or personal injury occur on your property.

What brands should I consider?

There are many different A/C manufacturers in the market, so it is important that you do not fall prey to clever marketing. While there are a few truly unique technologies in the market today, most residential systems are comparable between the reputable brands. The most important factor for a consumer is that the system is installed properly and tested according to proper procedures. The most important aspect of any brand is the reliability of the product as well as the availability of the parts to repair the unit. Many of the less common brands may have a good warranty on paper, but actually getting the parts to repair the unit can take days or weeks to get. The better manufacturers generally will have a factory distribution center in your area. Carrier, Lennox, and Trane are usually considered to be the top-tier brands in the industry.

HVAC Glossary - Confused with all these terms? Follow the link to our glossary:

http://www.kalosflorida.com/service_hvac_glossary.cfm