

## Why Is Clean Indoor Air Important?

Indoor air quality is a concern today as most newer homes are being built "tighter" to be more energy efficient. Existing structures have also been "tightened-up" with better insulation, weather-stripping, upgraded windows and high quality exterior doors. Unfortunately, making homes more energy efficient exacts an unexpected price. Indoor air quality suffers as the exchange of indoor and outdoor air is limited. Indoor air pollutants get trapped inside and can build up to harmful levels. Because of this, it is important to clean the air by filtering out as many pollutants as possible.

### Health Concerns

Indoor air pollutants can cause homeowners to suffer from flu-like symptoms such as headaches, nausea and respiratory irritation. They can also exacerbate existing illnesses such as allergies and asthma. Recent statistics show that over the past ten years, asthma cases have increased by 51.6% and that over 40 million people suffer from asthma and allergies today. By removing airborne dust particles from the air, you reduce the amount of exposure they have on your respiratory system.

### How Can I Clean Indoor Air?

There are a number of things you can do to reduce the amount of pollutants in the air. Frequent, dusting, vacuuming, and washing of bedding will reduce the amount of dust and dust mites present in your living spaces. Although these methods are effective, not all airborne particles can be eliminated. Some particles are so small they may escape through the vacuum or never land on a surface. To capture these particles, filtration devices can be helpful.

### Choosing An Air Filter That's Right For You

There are many factors you should consider when evaluating an air cleaning device:

#### **EFFICIENCY**

The efficiency of an air filter is measured in terms of the particle size it can capture. The higher the efficiency, the more effective it will be at the removal of small, hard to capture particles.

#### **COST**

Consider not only the initial purchase price of the item, but cost of maintenance and upgrades as well. Make sure that the filter you purchase is of reasonably high quality. Inexpensive filters may not clean the air as effectively as you need them to and may also need to be replaced more frequently.

#### **MAINTENANCE**

Air cleaning devices should be accessible and easily removable to make cleaning or replacing the filter a breeze.

### What Are My Choices When It Comes To Filters?

**Disposable filters** are generally made of coarse fiberglass mats in a frame mounted on a filter rack. They are often referred to as "throwaway" filters. Very large particles are collected by straining, as they are too large to go through the openings in the filter. Particles are also deposited on strands of the filter when they come in direct contact with one another. The filter efficiency increases as it fills with particles, until it reaches the point of saturation and begins to

lose as many particles as it gains. The disposable filter's capability is limited to larger particles.

**Reusable foam or metal filters** have slightly higher performance capabilities than disposable filters due to the use of the oils and adhesives applied to the filter to cause the particles to adhere to them. They are washable and must be recoated after washing to obtain their original efficiency for reuse. They are cost effective on large particles.

**Electrostatic filters** have a means for electrically charging the filter or the entering particles, much like a magnet, to attract particles to the strands of the filter as well as collecting particles by straining. They are more effective on large particles.

**Pleated filters** are constructed of fiberglass or synthetic fibers woven into a more dense material. The filter is arranged in V-shaped forms to increase the area of the filter material without increasing the face area. This increases the particle holding capability. This filter allows you to capture a wider range of particle sizes, from small to large.

**Electronic Air Cleaners** are highly efficient filters that use an electrical charge to remove and collect particulate matter such as dust, smoke, pollen, etc. The charged particles are then attracted to each other and forced to a series of alternately-charged metal plates where they are collected. These cells must be periodically cleaned with detergent and hot water to maintain the efficiency of the collection. They are generally used with a pre-filter to remove large particles before entering the cells.

**High-Efficiency Particulate Air (HEPA) filters** generally have an efficiency rating of 90% and above and are considered to be very effective at small particle removal. There are many models of portable HEPA filters intended for use in a room that are self-contained with their own air mover and electrical system.

### **Filter Maintenance And Operation**

The need to replace or clean filters is a function of many variables such as run time, efficiency, size and type. Typically, low-efficiency disposable and permanent filters need to be replaced or cleaned every one or two months in peak heating and cooling seasons. Electronic air cleaner cells should be serviced at this frequency as well.

### **Quality Dealers You Can Count On**

Your home comfort should include products and accessories that improve indoor air quality. Ask your dealer about the complete line of indoor air quality products from Lennox. Your family's health, and comfort are a priority, and working together, we can help to provide you with a "breath of fresh air"

Call your local independent Lennox dealer about updating your home comfort system. The benefits you'll feel and see will be worth it!

