



Duct Conditioning before Air Conditioning

Most people are now aware that indoor air pollution is an issue of growing concern and increased visibility. Many companies are marketing products and services intended to improve the quality of your indoor air. Duct cleaning generally refers to the cleaning of various heating and cooling system components of forced air systems, including the supply and return air ducts and registers, grilles and diffusers, heat exchangers heating and cooling coils, condensate drain pans (drip pans), fan motor and fan housing, and the air handling unit housing.

If not properly installed, maintained, and operated, these components may become contaminated with particles of dust, pollen or other debris. If moisture is present, the potential for microbiological growth (e.g., mold) is increased and spores from such growth may be released into the home's living space. "Some of these contaminants may cause allergic reactions or other symptoms in people if they are exposed to them," says Mike Berardi of Kosco, the area's leading heating and home comfort company. If you decide to have your heating and cooling system cleaned, it is important to make sure the service provider agrees to clean *all* components of the system and is qualified to do so. Professional companies like Kosco employ trained technicians to explain and perform the cleanings. "Failure to clean a component of a contaminated system can result in re-contamination of the entire system, thus negating any potential benefits," says Berardi. Methods of duct cleaning vary, although standards have been established by industry associations concerned with air duct cleaning. Typically, a service provider like Kosco will use specialized tools to dislodge dirt and other debris in ducts, then vacuum them out with a high-powered vacuum cleaner.

In addition, the service provider may propose applying chemical biocides, designed to kill microbiological contaminants, to the inside of the duct work and to other system components. Some service providers may also suggest applying chemical treatments (sealants or other encapsulants) to encapsulate or cover the inside surfaces of the air ducts and equipment housings because they believe it will control mold growth or prevent the release of dirt particles or fibers from ducts. They should only be applied, if at all, after the system has been properly cleaned of all visible dust or debris.

You may be familiar with air ducts that are constructed of sheet metal. However, many modern residential air duct systems are constructed of fiber glass duct board or sheet metal ducts that are lined on the inside with fiber glass duct liner. Since the early 1970's, a significant increase in the use of flexible duct, which generally is internally lined with plastic or some other type of material, has occurred. The use of insulated duct material has increased due to improved temperature control, energy conservation, and reduced condensation. Internal insulation provides better acoustical (noise) control. Flexible duct is very low cost. These products are engineered specifically for use in ducts or as ducts themselves. Many insulated duct systems have operated for years without supporting significant mold growth. Keeping them reasonably clean and dry is generally adequate. However, there is substantial debate about whether porous insulation materials (e.g., fiber glass) are more prone to microbial contamination than bare sheet metal ducts.

If enough dirt and moisture are permitted to enter the duct system, there may be no significant difference in the rate or extent of microbial growth in internally lined or bare sheet metal ducts. However, treatment of mold contamination on bare sheet metal is much easier. Cleaning and treatment with an EPA-registered biocide are possible. Once fiberglass duct liner is contaminated with mold, cleaning is not sufficient to prevent re-growth and there are no EPA-registered biocides for the treatment of porous duct materials. “EPA, [NADCA](#), and [NAIMA](#) all recommend the replacement of wet or moldy fiber glass duct material.” Says Berardi of Kosco.

For more information about duct cleaning you may contact Kosco directly at 845-331-7581 or visit their website at www.koscocomfort.com



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