



SEASONAL CLEANING FOR YOUR HOME'S HVAC

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INTRODUCTION

HVAC systems must be serviced and cleaned regularly to guarantee proper operation. When the air is clean, the quality of it improves and allergies are reduced in the area. When properly maintained, you will encounter fewer system failures and malfunctions.

This can help maintain a comfortable temperature in your home throughout both hot and cold weather, regardless of how extreme the temperatures in your location can get. Regular cleaning and maintenance are prudent investments. This increases the likelihood that it will operate for an extended period and detect issues before they deteriorate.

While cleaning your HVAC system may seem absurd, it is important. Your filter cannot do all these functions, especially if it is clogged and cannot function correctly. Professional duct cleaning removes dust, debris and even bugs that have found their home in the ducts.

If you are experiencing any issues such as rodents living in ducts, you must call a professional immediately. Failure to do so can have a detrimental effect on the quality of the air you breathe. Your home will become less pleasant as a result and you will almost certainly get respiratory difficulties.

A more cost-effective system is clean. When dust and similar contaminants are removed from your ducts, you will save money since the air will flow more freely. Efficiencies and effectiveness will increase as a result of improved flow. You should see an immediate change in your bill.

Also, you are saving money on any hospital or doctor expenditures that may have been incurred due to unhealthy, unsanitary circumstances and annoyances in your immediate environment.

Maintaining your HVAC system ensures that it operates efficiently throughout the year. When the outside temperatures are at peak, you won't have to worry too much. A system that has been serviced is more likely to withstand adversity.

A professional will detect any existing or future harm and will discuss your alternatives with you. This can potentially prevent you from future anguish and difficulties.

Cleaning and maintaining your HVAC system can significantly improve your overall well-being. Your home will have clean, circulating air and will provide a haven from the elements. You'll be able to relax in the comfort of your own home without worrying about health complications caused by poor air quality.

If you're considering hiring a professional to perform this work, you should do so. This will provide you with the required skills, information and equipment to perform effectively. You may be confident that your HVAC system will function properly and will be improved overall.

Also, you should discuss any issues you're having with your system, any work or upgrades you'd need to be done and any additional services offered.

If you need assistance with HVAC system cleaning, repair servicing and maintenance, Best Air and Heat LLC, Livingston, TX is here to assist you. Best air and heat LLC Company in Houston, Texas has decades of experience in providing air duct cleaning, comprehensive HVAC system cleaning, water damage cleanup and repair and storm preparation.

Contact us at Best Air Conditioning & Heating, LLC. 3464 U S Highway 190 W. Livingston, TX 77351 (936) 213-5116.

Visit <https://bestairandheatllc.com> to learn more about our services.

CHAPTER 1

A Well-Maintained HVAC System For Well-Maintained Indoor Air Quality

Isn't it true that temperature, lighting, air quality and other environmental circumstances affect your work productivity? "It does," is the answer. Not only does it have a tangible effect on your indoor activities but it also has a positive effect on your overall health.

HVAC systems ventilate and maintain pressure relationships between spaces in household and business settings, increasing an individual's safety and health. In this regard, your heating, ventilating and air conditioning (HVAC) system equal balancing the atmosphere in your house or business by filtering warm or cold air as needed.

There are many all-inclusive air conditioning businesses that you should contact for HVAC repair in San Antonio. They will conduct an initial survey to determine if any dust, pollen, dirt or debris is circulating in your area and evaluate the building for any leaks or mold spores damaging the system.

Apart from these, those with asthma or allergies may experience serious health difficulties if the vehicle atmosphere is uncomfortable. You must inspect your HVAC technology on an annual or biannual basis to ensure proper indoor air quality.

Before your city experiences the chilly weather that typically approaches San Antonio, Texas in the fall, contact local Best Air and Heat HVAC contractors in Woodville, Texas who are trusted for heating, cooling and air conditioning services and can help you control your environment by focusing on the following factors:

Factors Influencing the Performance of a Healthy HVAC System are as follows:

- Temperature regulation;
- Oxygen resupply;
- Elimination of moisture
- Detecting scents, smoke, heat and dust;
- Detecting bacteria, carbon dioxide and other gases in the air.

More maintenance aspects contribute to healthy HVAC performance, but for now, master these three factors to ensure your system functions effectively.

1. System Size

The size of the system is important for optimal HVAC performance. To begin, examine the size of your home and determine whether your system is too huge or too small for it. When the system is too huge, it will spend much energy starting up, resulting in brief cycling.

Second, if the system is too short, it can potentially wreak havoc on the HVAC conditions in your house or workplace by failing to handle the load. The air conditioner or heater will take an excessive time to achieve the thermostat's set temperature. Both of these scenarios will result in energy waste if the proper size system is not implemented.

Contact HVAC professionals who can determine if your system is undersized and further diagnose whether or not your system meets your home's load requirements.

2. Preventative Maintenance

Maintain a regular preventive maintenance program to determine whether the HVAC system is performing well or is at risk of failing. It is performed while the equipment is functioning so that professionals may immediately identify downtime and optimize performance.

That is why similar to your health regimen, and you should establish a preventive maintenance schedule. Just as your body needs regular health checks by a physician, your HVAC system also requires performance checks a few times a year.

Natural ventilation (air exchange) refers to air exchange with the outside and air circulation within the building. It is an important aspect in ensuring appropriate indoor air quality in both buildings and residences.

A routine maintenance checkup includes inspecting the system's components and efficiency and resolving any issues discovered during the inspection.

3. Air Quality in the Home

When a system is not cycled off properly, it results in poor indoor air quality, which impairs the performance of your HVAC unit, making it less energy-efficient and consuming more energy.

Regularly monitor your interior air quality because it is the most effective approach to encourage a healthy lifestyle for your family while also increasing the efficiency of your HVAC system.

Also, you can sort it out by cleaning your inside air handling equipment and outside compressors and removing the obstruction. Examine ducts for leaks and clean filters, among other things. This is a simple thing you can do to ensure your system is not

harmed. If you neglect to perform these tests, psychologically prepare yourself for expensive repairs.

Another thing you may do is clean the inside of your furnace. Also, it will assist you in lowering your electric expenditures. If you're pressed for time and a workaholic, feel free to contact professionals who will test the heat exchanger to ensure no carbon monoxide is leaking into your home or place of business.

We recommend addressing primary factors on your own and contacting professionals for assistance in healthily maintaining your HVAC performance, providing you with a more comfortable home or workplace with a high-quality indoor environment.

Best air and heat LLC Company in Woodville, TX has decades of experience in providing air duct cleaning, comprehensive HVAC system cleaning, water damage cleanup and repair and storm preparation.

CHAPTER 2

The Important Nature Of HVAC Cleaning

Today, almost every home in Woodville, Texas, includes an HVAC system. It is a system that assists in proper filtration and circulation of air. Whether it's freezing or hot outside, the system is great at regulating the temperature within the home to provide a suitable level of comfort for everyone.

These systems utilize large-diameter ducts. The HVAC ducts in Woodville provide a path for exhaust and prevent unfiltered air from re-entering. If you'd like to have them serviced in Woodville, duct cleaning is simple to schedule.

Apart from residential buildings, heat ventilators are also used in retail malls, workplaces and multi-story structures. While an HVAC duct system has many advantages, it is a machine at the end of the day. The consequences are unavoidable. The system's efficiency will deteriorate with time. Regular maintenance, on the other hand, ensures the system's longevity.

People often neglect to service their heat ventilators, which results in the system slowing down over time. Many folks wonder why service is necessary. Most people are unaware that cleaning and maintaining the HVAC system and duct cleaning should be performed every 2-3 years for different reasons. This chapter will explain why doing these two things will benefit your wallet and your family's health.

The primary purpose of getting your HVAC system cleaned is to improve its efficiency. Many homeowners are unaware that as these units age and grow a little dirtier, they become less efficient to operate and must work much harder to heat and cool your home.

Cleaning the system will result in a reduction in energy consumption, which will result in a reduction in your heating and air conditioning expenses. As a result, the initial investment in cleaning the system will more than pay for itself in the long term.

When you decide to get your system cleaned, it is important to research the cleaning company. Many companies advertise great discounts on cleaning services for less than \$100 but most of these businesses are not trained HVAC servicing and cleaning specialists.

Hire certified professionals to ensure that they do not do more harm than good to your system. A normal service call for cleaning should cost between \$400 and \$500 if performed properly. Another reason it's a good idea to get your ducts cleaned every couple of years is to improve your home's air quality.

Many homeowners never get their ducts cleaned during their ownership of the property and this trend needs to change for the sake of the health of your family members who live there. The Cincinnati Enquirer recently published an article on the health benefits of having your ducts professionally cleaned by a licensed duct cleaning company.

Many items have been discovered in air vents and ducts throughout the years. Professionals discovered decomposing animals, toys, socks, pet hair and, of course, an abundance of dust and grime.

Consider how inefficient a duct is when a dead animal is obstructing the vent. You want the air forced into your home to travel through clean vents, ensuring that everyone breathes clean air.

The lengthy processing:

When the unit is dirty on the inside, dust accumulates on all of its components, including the net, filter and exhausts. This slows the unit down and reduces the system's efficiency.

When a system becomes slow, it indicates that the unit is using considerable effort to deliver less. This is a waste of energy and as a result, your electricity bills will increase. As long as the system is serviced and cleaned regularly, it will operate at peak efficiency.

System life expectancy is decreased:

If the ventilator is not serviced regularly, it begins to deteriorate fast and may eventually fail. A healthy running machine will continue to operate normally for a longer period. To prolong the life and ensure optimal ventilator operation, strive to maintain frequent servicing so that you do not run into any problems in the future.

Electricity bills are excessive:

When the system is slow, your electricity cost will increase at the end of the month. It's self-evident that when a machine is operating erroneously, it will consume energy. By doing routine maintenance on the unit, you can save money on much more than the HVAC system. You will save money that would have been spent on additional electricity bills.

The unit has completely failed:

People often leave their ventilators on for an extended period and neglect to maintain them. As a result, the unit completely fails. What occurs is that the units stop working and they must purchase a replacement.

If you do not fix it promptly, you will be forced to purchase a new one. When your HVAC unit can operate for an extended period with minimal maintenance, purchasing and installing a new system appears to be a complete waste of money.

Another important reason for having your ducts cleaned is for your family's health. Asthma and allergies are on the rise among American children. Homes must thoroughly

clean their HVAC system and ductwork to remove dust-borne allergens that can trigger or exacerbate asthma symptoms.

If you clean your vents and system every 2-3 years, you will notice a reduction in allergy symptoms and asthma attacks in people who live in your home who suffer from these problems.

Allergens and pollutants in the house can wreak havoc on your health. Sneezing, runny nose and eyes and coughing may indicate that harmful toxins have taken over your home. The NADCA estimates that an ordinary home can accumulate up to forty pounds of dust and allergens per year.

In the summer, your cooling and heating system are responsible for removing hot air from your home, while in the winter, it is responsible for removing chilly air. Because it accomplishes this by circulating the air throughout your home, if your system is not kept clean, these allergens and dust particles are re-circulated.

This can create havoc for those who suffer from even moderate allergies. Contaminants in your HVAC system can cause the unit to work harder, which costs you more money over time. Also, the cleaner the unit, the less probable these allergens will circulate throughout your home.

Whether you have allergies or not, it's a good idea to have your system cleaned by a specialist regularly. If you're unsure where to begin while looking for someone competent, try the following recommendations for locating someone capable.

- 1) Locate a licensed professional who is confident in their ability to complete the task with the necessary tools, skills and experience.
- 2) Contact multiple contractors who are willing to provide a no-obligation estimate of the project's cost.

3) Request references from friends and family members.

4) Inquire about the contractor's vacuum device. Typically, this will be truck-mounted or portable equipment. Generally, truck-mounted or trailer-mounted units are more powerful. Any gadget that is not connected to a collection device should have a HEPA filter fitted at the very least.

If you're wondering how often you should get your HVAC system cleaned, the answer is that it depends on different things. You will need to inquire about the frequency of cleanings recommended by the contractor but remember that more regular cleanings will be essential if you have any of the following in your household:

- Pets

- Smokers

- Asthma and allergy sufferers

- Recent renovation

- Water damage

Consider having the system cleaned before relocating. A competent HVAC cleaning service should cover the furnace, blower, air conditioning coils, air ducts, registers, and returns.

In most cases, partial cleanings are insufficient to eliminate all allergens and dirt. If you obtain an estimate, verify that the price is inclusive. Some businesses may give a price for cleaning the furnace alone and charge an additional fee for cleaning the remainder of the system.

The EPA estimates that the average cost is between \$400 and \$1,000, depending on the size of the system, accessibility, level of contamination and kind of duct material present.

Also, they warn consumers about so-called "blow and go" companies, which typically consist of a representative showing up at your property with little more than a simple shop vac-style vacuum. They typically charge a low rate yet cannot complete the work due to a lack of equipment.

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CHAPTER 3

Comprehensive Air Duct Cleaning Using The Power Vacuum Air Wash Method

HVAC system cleaning, also referred to as air duct cleaning, can give many benefits to building occupants when conducted properly and effectively by an ACCA member business equipped with the industry's most powerful air duct cleaning technology.

The machinery will enable the company to clean air ducts using the power vacuum air wash method, which has virtually no limitations in terms of cleaning capabilities and is capable of effectively removing all contaminants from an air duct system.

Companies that utilize shop vacuums or carpet cleaning attachments will not profit from the service, as they are often quite limited in their ability to remove all contaminants from the air ducts. I have listed the benefits that an occupant may enjoy following a complete and comprehensive air duct cleaning using the power vacuum air wash method.

* Greater efficiency equates to lower energy costs.

(For instance, according to ASHRAE, air conditioners run 20% less efficiently when the evaporator coil is blocked than when the evaporator coil is clear. Was this dust created by chance, or did the furnace pull it through the filter, causing a buildup in the air ducts over time?

It's common for furnace filters to have micron ratings, with the leftover pollution passing via the blower and into the evaporator coil, where it will condense and congeal. Dirt does move in a forced-air ventilation system, as this would indicate clearly.

If dirt did not circulate in a ventilation system, there would be no need to maintain a furnace filter. The majority, if not all, licensed HVAC companies and/or contractors will always recommend that you keep a furnace filter (which is designed to trap circulating dust, dirt or debris).

Also, it has been established clearly that potentially dangerous bacteria and molds can grow on an evaporator coil.

Compared to filthy HVAC components and parts, clean HVAC components and parts will work at peak performance and efficiency.

* In all cases where debris is present in a ventilation system, removing obstructions results in greater airflow. (For instance, when an HVAC specialist sizes your air duct system, specific rounds are rated to provide a specific quantity of CFM airflow.

These CFM values can vary significantly depending on different parameters, including trunk line dimensions, supply pipe length distances, the presence of elbows and the diameter of the supply pipe.

As an example, suppose a 6" diameter supply round was constructed to reach a 118 CFM airflow rating and suppose a 3" diameter beer can was discovered in the round during construction.

Do you believe that a 3" diameter remaining diameter would still allow for 118 CFM airflow?

We felt the same way. Indeed, the beer can decreases the amount of CFM that the supply pipe can blast out and it is a good idea to remove obstructions from the ventilation system to ensure that your supply vents function properly.

* Avoid the high cost of equipment repair. (For example, filthy blower motors function at greater amp draws, consuming more energy and working harder than a clean blower

motor would. It is obvious to assume that when a blower motor operates at a higher amp draw than when it operates at a lower amp draw, the motor will naturally operate hotter and hence will burn out sooner.

It is often less expensive for the homeowner to pay for an entire house air duct cleaning than replacing the blower motor. Extending the life of an expensive blower motor is a good idea.

Did the blower motor include an integrated dirt production plant?

We felt the same way. The dirt likely moved through the ventilation system and accumulated to the point where the blower motor became unclean.

* Having this service performed may result in less dust accumulation throughout your home. (For instance, the distinct micron-sized matter has variable weights due to the matter's composition and micron size.

Because of its weight, some matter will remain immobile in the airstream, regardless of the CFM. On the other hand, Finer micron matter will blow out of the duct and be sucked back in by the return air if it made it past the furnace filter (remember, furnace filters only collect a portion of airborne pollution, not the entire amount).

Over time, a buildup builds and when it reaches an important level, the ventilation system, which is a circulatory system, will begin to discharge fine micron matter at a higher rate than it would if 99 percent of this matter was eliminated at the source with an infrequent air duct cleaning.

Would you never clean your bedspread sheets if you knew they might become dirty again over time? Certainly not; that is repulsive and does not promote good hygiene.

Therefore, cleaning the ventilation system periodically is a good idea. Still, it does not have to be done every year if it is done properly using a superior power vacuum air

sweep method of air duct cleaning, which effectively removes 99 percent of ventilation contamination buildup and sometimes more depending on the composition of the matter and if it was harmed.

* Inhale cleaner air! The term "sick building illness" is a medical fact. This situation does not occur often but has been documented in different locations and times. The most well-known incident occurred in 1976 when an American Legion meeting was held in a Philadelphia building. Indeed, this episode gave rise to the term Legionella, derived from the word Legion in the American Legion.

Legionella, a bacteria generated when moisture, trace nutrients (dirt) and the proper temperature combine, had grown in an air conditioning system, resulting in the world's biggest Legionnaire outbreak. By early August (1976), news organizations reported that 6-14 of the men in Pennsylvania had died.

This terrible situation may have been prevented if the HVAC system had been cleaned regularly. Every Federal building in America has its HVAC system cleaned regularly. Is there something the federal government knows that the common citizen does not?

Your HVAC heating and cooling system circulates throughout your home's air. It performs this function at least five or seven times daily. This air carries with it the everyday dust and minute particles of life.

Most of this dust and debris is captured in the filters of your furnace and air conditioner. However, some of it does pass through and gradually accumulates in the vents located throughout your home.

Occasionally, this ductwork is improperly installed or we fail to check our filters often enough. This results in the accumulation of dust within our ducting. This will also affect your HVAC system's efficiency.

Health Risks

The Environmental Protection Agency (EPA) has not produced a study concluding that dirty ductwork causes a measurable health issue. There is no evidence that this will increase the amount of dust in your home.

"Because knowledge concerning air duct cleaning is still in its infancy, it is impossible to make a blanket suggestion about whether you should have your home's air ducts cleaned.

The Environmental Protection Agency of the United States of America (EPA) strongly encourages you to study this paper in its entirety since it contains important information on the subject.

There is no evidence that duct cleaning prevents health problems. Likewise, there is no solid evidence that filthy air ducts increase dwellings' particle (e.g., dust) levels. Much of the filth in air ducts sticks to the duct surfaces rather than entering the living environment. It's important to remember that clogged air ducts are just one of many probable sources of particulates in homes.

Pollutants that enter the home through both outside and interior activities such as cooking, cleaning, smoking or moving about can expose residents to more toxins than unclean air ducts. Also, there is no evidence that a trace amount of home dust or other particulate matter in air ducts causes a health concern."

Nonetheless, some people have an issue with airborne dust, particulates and pet dander. They'll have runny eyes, itchy noses and a general sense of malaise. Others may be allergic to these particles or dander and will suffer greatly as a result.

Self-Examination of Ducts

You can conduct some investigative work on your own before contacting a professional. Open the air register and insert a small digital camera equipped with a flash into the duct, holding it carefully. Extend the reach of the camera as far as you can without dropping it. Take many photographs from all four sides of the ductwork.

All ducting will accumulate debris, which can be removed by partially inserting a vacuum cleaner hose into the ductwork. Eliminating this accumulation will improve your HVAC system's airflow and efficiency. If your photographs reveal a significant dust accumulation, you may wish to seek expert duct cleaning.

Organizing

To clean your ductwork, professional cleaners use one of three distinct ways.

One method is the use of a portable vacuum cleaner. A big portable vacuum equipped with a HEPA (high-efficiency particulate air) filter is manually maneuvered within the ductwork.

This could result in the formation of pockets of dust. Workers clean with a brush attached to a huge portable vacuum with a HEPA filter. On the other hand, the hand-held approach is not fully dependable and may result in dust pockets.

A motorized spinning brush installed within the ducting is another option. This brush and hose are connected to a vacuum truck mounted on the back of a pickup truck. If you live in an older home, this rotation may cause damage to the existing ductwork.

Finally, an air sweep is used, in which pressurized air is supplied through a hose and into the ducts. A truck-mounted vacuum extracts dust and particles that the compressed air has loosened.

Expenses Associated with Duct Cleaning

Also, the EPA states in their October 1997 EPA 402-K-97-002 that the average cost of a 2,000-square-foot residential dwelling is:

"These services always cost between \$450 and \$1,000 per cooling and heating system, depending on the services provided, the size of the system to be cleaned, the system's accessibility, the climatic location and the level of contamination."

Get quotations from at least three air duct cleaning service companies that adhere to the National Air Duct Cleaners Association's standards and requirements (NADCA).

Avoid placing too much stock in any discussion of health claims as you obtain bids from service providers. Every five years, the average home's ducts should be cleaned. Avoid annual cleaning contracts. It is a good idea to have your HVAC system cleaned and inspected yearly.

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CHAPTER 4

Cleaning of Residential Air Ducts

Cleaning the Heating, Ventilation and Air Conditioning (HVAC) System regularly helps the health of all occupants. HVAC systems accumulate mold, fungi, bacteria and a range of other impurities that degrade the quality of the air inhabitants and visitors breath. A clogged air duct adds to poor indoor air quality and harms the health of residents.

Residential air duct cleaning aims to eliminate these impurities from a home's HVAC system to provide the highest possible indoor air quality.

The most effective method of cleaning an air duct and/or ventilation system is to utilize a specialized, strong vacuum that creates negative pressure in the air duct/ventilation system.

While the vacuum draws air into the system, devices are put into the ducts to dislodge pollutants and debris from interior surfaces, transporting them to the vacuum via the home's air ducts and ventilation systems.

Vacuum collection on its alone is insufficient to clean the HVAC system. Brushes, air whips, "skipper balls," and other agitating instruments scrape the surfaces of impurities and debris within the air duct system, propelling contaminants and debris into the vacuum collecting device (s).

To control microbiological contamination, antimicrobial chemical sanitizers are sprayed to the interior surface of air ducts. Before sanitizers are used, the system should be completely cleansed. All antimicrobial compounds used in HVAC systems must be EPA registered.

Inquire about the material safety data sheet for the chemical (MSDS). If you continue to have concerns, contact the EPA at 1-800-438-4318. There are no antimicrobial products registered with the EPA on porous system surfaces, such as fiberglass.

When sanitizing air ducts, you want to ensure that the air duct cleaning firm employs safe, EPA-approved solutions that are non-toxic to humans, pets and the environment. Through the use of an atomizer, the sanitizing substance is sprayed throughout the ventilation system.

Allergy sufferers, infants and the elderly are particularly susceptible to respiratory microbes such as bacteria, mildew, fungi, algae and dust mites, necessitating an effective sanitizer to eliminate odor-causing microorganisms and contaminants associated with mildew, allergies and bacterial growth.

Ascertain that the sanitizer is classified as a category IV product by the EPA, which has the lowest toxicity level. Sanitizing air ducts entails establishing and enforcing toxicity and safety controls to assure the products have no adverse cutaneous (skin), ocular (eyes), inhalation (breathing) or ingestion (swallowing) impacts.

There are two types of vacuum collecting systems that are widely used: those installed on trucks and trailers and those that are portable. Equipment placed on a truck/trailer is typically more powerful than portable equipment. In comparison, portable equipment can often be transported inside a facility directly, bringing the vacuum closer to the ducting.

Both types of equipment are thoroughly cleaned following air duct industry requirements. Vacuum units should be connected to a collection device before disposal to ensure their safety. A vacuum collector that exhausts indoors must be HEPA filtered (high-efficiency particulate air filter).

Many factors determine the frequency at which air ducts (HVAC) are cleaned:

*before occupying a new home

*following home improvements or remodeling

* Some household smokers.

*Hair and dander-shedding pets

*Contamination of water supply or damage to the HVAC system.

*Allergy and asthma sufferers benefit from improved indoor air quality.

According to the United States Environmental Protection Agency, "duct cleaning services" typically cost between \$450 and \$1000 per heating and cooling system, depending on the services offered, the size of the system to be cleaned, the accessibility of the system, the climatic region, the level of contamination and the type of duct material.

Consumers should be cautious of air duct cleaning companies that make broad claims about the health advantages of duct cleaning; these claims are unsupported.

Also, consumers should be cautious of "blow-and-go" air duct cleaning businesses that charge low rates but perform a substandard job cleaning the heating and cooling system.

Also, some businesses attempt to convince consumers to purchase unnecessary services or give services without the consumer's permission. Report the company to the Better Business Bureau and local, federal and state government officials.

Conduct at least three interviews with local air duct and HVAC cleaning contractors to conduct a free system check and submit a quote for cleaning the HVAC system.

Reduce the number of contractors present on your list:

Verify if the company is an active member of the National Air Duct Cleaners Association (NADCA).

Confirm if the company is NADCA-certified to clean HVAC systems.

Inquire about the company's history and assess whether that experience is sufficient.

Inquire about the company's equipment and experience cleaning homes similar to yours. Inquire of neighbors for references.

Inquire as to whether the business is a member of the local Better Business Bureau.

Obtain documentation that the business is properly licensed and insured.

Confirm that the contractor will clean and visually inspect all air ducts and associated system components.

Steer clear of adverts offering "\$99 whole-house specials" and other sales ploys.

NADCA sign a Code of Ethics agreeing to do everything possible to safeguard the consumer and adhere to NADCA air duct cleaning standards. Air duct cleaning businesses must adhere to severe regulations. Each member must have on-staff certified Air System Cleaning Specialists (ASCS) who have passed the NADCA Certification Examination.

Passing the exam demonstrates an in-depth understanding of HVAC design and cleaning techniques. Also, Air System Cleaning Specialists are expected to maintain their NADCA certification status by attending seminars.

Before hiring an air duct cleaning business, learn as much as you can about the organization.

*Inquire about the company's NADCA membership and accreditation.

*Inquire about the contractor's experience cleaning home HVAC systems.

*Request proof of the contractor's current Workers' Compensation and General Liability insurance coverage (Ask for Certificate of Insurance)

*Ask the contractor to show you the licenses required by your city and state to perform the work. (Licenses are not required in all cities or states.)

*Ask the contractor for three to five client references with phone numbers for air duct services performed within the last 30 days.

*Request that the contractor thoroughly inspect your system before performing any work and notify you of any issues. This is mandated by the current NADCA Assessment, Cleaning and Restoration (ACR) Standard for HVAC Systems.

*

Solicit from the contractor the ability to conduct visual inspections at any time during the cleaning? (Mirror and flashlight and camera or another remote vision system)

*Inquire as to whether the contractor will clean the entire system, including the coils and fans.

*Inquire as to whether the company will perform the work. (Some businesses outsource work to independent contractors; use the same stringent criteria with subcontractors.)

*Before the inspection, request guaranteed pricing from the contractor. This may result in additional costs due to discovering mold in the system, damaged fiberglass insulation and cleaning or treating cooling coils.

The time required for an air duct cleaning firm to clean a residential HVAC system is determined by the following factors:

*the size of the residence

*the number of systems

*the level of the contamination

*the number of HVAC cleaners assigned to the job

Inquire of the three HVAC firms you trust the most to evaluate your system and provide you with an estimated completion time for the task and a list of all the procedures each contractor intends to do throughout the job.

Remember that we are inhaling millions of germ-carrying dust and mold particles from air ducts, which can cause allergies, asthma and even death. In every home, dust, filth, human skin flakes and pet dander accumulate in the air ducts, converting them into storage cells for allergies, mold spores, bacteria and other contaminants.

The issue begins before you move into a newly constructed home, with the accumulation of drywall dust, sawdust, and other debris in ducts, creating an ideal environment for viruses and allergens to develop.

This problem grew worse in the 1970s, when new construction techniques tightened the seal on buildings, restricting fresh air flow. Every day, families breathe air that is continuously pumped by your HVAC system through contaminated ductwork.

The most effective technique to verify the effectiveness of HVAC system cleaning requires a visual inspection of the system before and after cleaning. Also, print a copy of this chapter and use it as a post-cleaning checklist to guarantee a professional job was

performed. If visible dust or debris during the visual inspection, the system should not be declared clean.

A trained, professional air duct cleaning contractor should allow you to inspect system components, utilizing specialized inspection tools when necessary. Using a flashlight and mirror, you can do your visual inspection.

The best air duct (HVAC) cleaning businesses offer a 100% guarantee and will not charge you for the air duct cleaning service until you see the Duct-Camera results. After professionals clean the HVAC system, you can practically see the dust and allergen-free air ducts. The assurance ensures that all visible loose particle is eliminated from all system components.

If the project is not completed to the customer's satisfaction, the system's affected components and/or the entire job will be re-cleaned at no additional charge to the customer. These businesses consistently outperform customer expectations. The company must guarantee complete customer satisfaction and be willing to return and redo work if necessary.

The best HVAC cleaning firms allow you to view the Duct Camera whether normally unreachable portions of the system are clean before you pay for the job. These air duct providers employ courteous NADCA-certified experts that comply with all NADCA regulations.

You'll have peace of mind that a comprehensive service was completed, ensuring both value for money and the protection of your house. A professional air duct cleaning firm evaluates and corrects the signs and causes of poor indoor air quality, including unclean ducts, mildew, chimneys, unhealthy carpets, hazardous dryer vents and humidity.

The best companies do not advertise unbelievable low \$79 entire house costs and coupons. Businesses who do so are unlikely to have the necessary equipment, training or even the intention to deliver meaningful outcomes.

To compound matters, incorrect air duct cleaning might result in health problems for your family." so the lowest price can end up being costly in the long run." If a price appears too good, it is most likely given by a predatory business owner seeking an easy target.

You can engage an air duct cleaning business with confidence now that you understand how to clean your air ducts and enjoy the following benefits properly:

According to the EPA, Health Indoor air is up to 70 times more contaminated than outside air. Cleaning the air ducts removes airborne contaminants such as germs, fungi, mold spores, pet dander and pollen, which may help ease allergy and asthma symptoms.

Equipment Life Extension According to the Louisiana Cooperative Extension Service, dirt and dust are responsible for 9 out of 10 system failures. Keeping the heat exchanger cold is one of the duties of the fan situated inside your air handler.

Accumulated dirt and debris can significantly limit the CFM (cubic feet of air per minute) rate! This is the most typical reason for heat exchanger cracks. Cleaning your HVAC system may help keep your heating and cooling system from breaking down or aging prematurely.

Dusting should be minimized. Air duct cleaning contributes to dust reduction in the home by removing dust where it travels the most - through the air duct system.

Savings on energy According to the EPA, an accumulation of dirt on a heating coil may result in a 21 percent reduction inefficiency. A clean air conveyance system may contribute to increased efficiency and cost savings associated with heating and cooling.

Best air and heat LLC Company in Onalaska, TX" has decades of experience in providing air duct cleaning, comprehensive HVAC system cleaning, water damage cleanup and repair and storm preparation.

CHAPTER 5

Are You Prepared for Spring Cleaning?

I recently did a 'Spring Cleaning' of my home. Dust and cobwebs in those difficult-to-reach locations that go unnoticed during the dark, chilly winter days had to go. There were a few coats of paint here and there, window seals cleaned, rugs were beaten, and garage dusted and organized. You get the picture. ‘

My spring cleaning would be incomplete unless I maintained my air conditioning equipment. Some of you who are familiar with me are laughing right now. Yes, I am capable of maintaining my system.

Having my hands dirty serves as an excellent reminder of the value of 'Preventative Maintenance

March and April are peak months for our 'Preventative Maintenance Services.' While the work may seem onerous, your system will not survive without adequate preventative maintenance. Summer is almost around the corner and my question to you is this:

"Are you up to the task?

Is your structure prepared?"

In this chapter, I present a very brief checklist that you can use to conduct a 'Spring Cleaning' of your systems. I lack the space on this page to present all the preventative maintenance chores that our technicians perform and you lack time to read them.

As a result, I'll discuss a few different systems and highlight the most important elements that require attention this spring. However, let us first examine what the

United States Department of Energy states about how appropriate preventative maintenance is directly tied to energy savings:

HVAC Maintenance Procedures | Percentage Energy Savings

1. Changing the order in which actions are performed: 25%-30%
2. Cleaning Coils: 5%–15%
3. Replacing dirty air filters: 10-15%
4. Scale Removal from Condenser Coils: 25-30%
5. Adjusting the Air/Fuel Ratio of the Burners: 15%
6. Cleaning the Burner Assembly: 15%
7. Removing Soot from the Burner's Fire Side: 9 percent
8. Belt Slippage and Pulley Alignment Elimination: 15-20%

*Information courtesy of the United States Department of Energy.

I've divided some of the most prevalent types of air conditioning equipment into many groups below. Each spring, I listed the top five Air Conditioning 'To-Dos' under each category. The detailed tasking requirements for a commercial office building may differ from those for a hospital and the requirements for a hospital may differ from those for a manufacturing plant.

However, this is a streamlined list that applies to any air conditioning equipment regardless of the business market in which you operate. If you are already implementing

these, you are already ahead of the game. If not, please contact us at the conclusion page of this guide. Our contact is there.

EQUIPMENT FOR THE ROOFTOP / UNITARY (DX):

1. Replace filters annually in the spring. This is one of the most fundamental maintenance tasks regardless of the season. I recommend changing the filters every three months at the very least. The pleated filters with a percentage of 40% perform well. Ignore the Wal-Mart, blue, low-cost filter.

2. Condenser Coils: Vacuum the Condenser Coils. Each spring, this is the most labor-intensive maintenance task. The process for coil cleaning is debatable. Avoid using acid-based or high-pressure washers. When using a pressure washer, ensure that the pressure can be adjusted and the water volume raised. Conduct a visual inspection of the evaporator coil.

If filters are changed regularly, the evaporator coils will not need to be cleaned. If dirt gets into the evaporator coil, use a mild soap solution to flush the condensate pan naturally. NEITHER use condenser or coil cleaner on the indoor evaporator coil nor use condenser coil cleaner on the outdoor evaporator coil!

3. Belts: Inspect and replace if necessary. If your pulleys are wearing more than one belt, ensure that they are all the same size. Adjust the pulleys as necessary. Never attempt to push a belt onto pulleys. Allow time for the pulley to be loosened, the belt to be slid on and the belt to be tightened to scale. Always use a tensioning tool for the belt.

4. Drain Pan: Inspect and clean the condensate pan if necessary. If neglected, this small item can be mistaken for a roof leak. I've witnessed blocked drain pans and traps destroy an expensive computer system. Algae drain tabs are effective but should be used rarely.

5. Compressor & Motors: Inspect all evaporator motors, condenser fan motors and compressors for proper operation. Amperage and voltage should be recorded for each compressor and motor.

Then make a comparison between your readings and the nameplate. Put your refrigerant gauges on the compressors to monitor the charge if the weather is warm. A licensed technician should do this task. It is required by the EPA and by law.

CHILLERS (Centrifugal) - Top 5 Spring Checklist:

1. Inspect and Clean the Condenser Tubes If this task should be scheduled before the arrival of warm weather. SML schedules this work for February and March. Avoid excessive brushing. When a water treatment program is managed properly, very little cleaning is necessary.

2. Check the performance of the compressor and change the oil filter. Check the oil level and add or replace as necessary. Avoid overfilling (check O&M manual). Send a sample of oil to a laboratory for analysis.

3. Journal Sheets: Maintain a log of all temperature, fluid level, pressure and flow rate observations. Log sheets are included in most production operating manuals. Since 1999, graphic control panels have been standard equipment on a large number of chillers.

They eliminate the need to record a large number of these statistics manually. These panels present user-friendly logs on a single big active-matrix screen, allowing operators to see many linked metrics concurrently.

4. Purge Unit: The dehydrator used to purge the purge unit should also be changed regularly, preferably every three months. Also, annual cleaning and inspection of valves and orifices and draining and flushing oil and refrigerant from the purge unit shell are preventative maintenance procedures for the purge unit.

5. Refrigerant Charge Level: Verify that the refrigerant charge is correct and conduct a leak check.

AIR HANDLERS - Top 5 Checklist for Spring:

1. Filters: As with rooftop equipment, filters are important to the air handler's effectiveness and life expectancy. Replace filters annually in the spring. I came upon this intriguing chapter about filters by chance. Continue reading to learn more.

2. Evaporator Motor: Verify that the evaporator motor and/or motors operate at the right voltage and amperage. Lubricate as necessary.

3. Belts and Pulleys: Inspect and replace worn belts. Adjust the pulleys as necessary. For rooftop units, follow the same belt replacement instructions as described above.

4. Drain Pan: Use compressed air to blow out the condensate drain line (DO NOT USE FREON!) and examine the pipes and slope to the floor drain.

5. Bearings: Inspect the shaft and bearings for signs of wear and proper fit. Tighten the set screws and lock collars on the blower and bearing.

CIRCULATING PUMPS — Check these five items this Spring:

1. Motor: Inspect the motor's overall operation. Voltage should be checked and recorded and compared to the nameplate. Determine and record the amperage, comparing it to the nameplate value.

2. Alignment: Using gauges, verify that the pump and motor are properly aligned.

3. Valves: Ensure that all valves and filters are operating properly. As needed, clean filters.

4. Mounting: Verify that all mounting bolts and brackets are secure. Ascertain that the pump and motor are securely attached to the base plate.

5. Gaskets: Check for any leaks around all gaskets.

COOLING TOWERS - Top 5 Items to check this Spring:

1. Basin: Thoroughly flush and clean the cooling tower basin. Remove any debris that could block the filters and pumps. Inspect steel basin for corrosion and holes. All sumps should be inspected for accumulation of debris, condition of screens and operating drain valves.

2. Motor: Check motor operation. Record voltage and amperage and compare with the nameplate. Some motors require oil. Please check the O&M handbook for further details.

3. Belts and Bearings: Check or Replace Belts. Adjust the pulleys as necessary. Use power band belts!

4. Water Treatment: Consult with your present service provider on your water treatment program.

5. Fill: Inspect tower fill for any damage, degradation or missing or misaligned splash bars. Examine the splash bar and fill supports for damage.

Many of you with a technical bent or familiarity with HVAC Preventative Maintenance is screaming, "YOU FORGOT." Yes, there is much more, such as ensuring correct superheat and subcooling, vibration analysis, eddy current testing and contactor pitting. However, this chapter is aimed to highlight some of the most important items your equipment requires attention to each spring.

If you wish to learn more about your systems and a customized preventative maintenance program for your facility, please contact us at Best air and heat LLC. Every day, we specialize in HVAC preventative maintenance. We are the experts.

"So please don't neglect your HVAC equipment this spring and as always, leave the mechanical work to us!"

CHAPTER 6

How HVAC Duct Cleaning Process Works

Understanding how the duct cleaning process works is the first step to appreciating why your home needs a professional cleaning service. Dust, dander and allergies accumulate in your ducts over time. Also, these compounds adhere to other surfaces, such as your heating coil, cooling coil, blower and heat exchanger.

All these airborne particles accumulate and impair your HVAC system's function. If you will have your air ducts cleaned, it goes to reason that you want healthier air in your house and a more efficient temperature control system. Right?

Naturally, you do. Who wouldn't want to live more comfortably while also saving money? Duct cleaning should be thought of as a comprehensive cleaning procedure, not just a duct cleanout. A professional and reliable company can visit your home and provide you with an estimate covering duct cleaning and internal HVAC component cleaning.

Consider the following. Your air ducts become clogged for a reason. Our homes have become more energy-efficient than ever before as we attempt to reduce our energy bills. Once dander, dust and other airborne contaminants make their way inside our home, they remain.

Your HVAC system operates on a supply and return system, which means that air is drawn from return ducts, conditioned for heating or cooling and returned to the home via supply ducts.

Your home's air (together with all of its pollutants) is cycled five to seven times daily on average. This implies that any dust and debris that did not adhere to the interior HVAC

system components or the inside walls of the air ducts returns to your home, where the cycle repeats.

The simple fact is that no matter how much time you spend in your home, dust and debris will find their way in and become trapped. That implies that it must find a home. If it is not airborne and circulating, it has clung to something, most likely your HVAC system.

This is why homeowners must invest in duct cleaning. For some folks, dust is a somewhat innocuous annoyance. However, duct cleaning can significantly improve their quality of life for those who suffer from autoimmune disorders, asthma, or chronic respiratory sickness.

Conduct your inspection to see whether your ducts have a buildup of filth. You may believe that is an impossible feat but it is not. Grab your camera phone and insert it into your air duct; flash on.

If there is any buildup, it is easy to see why a duct cleaning service is required. However, there are additional reasons why duct cleaning is an important component of healthy living. Air leaks in your ducts are an excellent example of this.

As is often known, when an air conditioner is turned on, the condenser coil extracts moisture from the air and discards it via a condensate drain. If there is a leak in your air duct, mold growth will occur because the moisture does not reach the condenser coil, leaving the structural parts adjacent to the leak exposed to a constant stream of moisture.

Moisture rots wood and/or insulation over time and accumulates mold. The mold then has the potential to spread throughout your home.

It is important to thoroughly clean any mold accumulations in your air ducts and the wood and insulation. Sealing such ducts would likewise be strongly recommended. Not

only are you providing a breeding ground for mildew and rot but you're also wasting any conditioned air you generate and pushing your HVAC system to work harder to maintain ideal comfort.

Also, duct cleaning can ensure that rats and insects do not make their homes in your air returns. When it comes to disease transmission, these critters are the number one public adversary.

To summarize, it is in your best interest to contact a reputable and licensed HVAC provider to ensure that the air in your home is healthy for you and your family. Your physical and financial well-being will benefit.

The following are just five of the many reasons why you should have your ductwork cleaned regularly:

1. **Visible mold growth:** If you can see mold growth within or outside of your ducting, you must contact a specialist immediately. If the mold is developing on the interior of the ducting, only a professional will be able to remove it; you should not attempt this yourself. Stopping mold growth at the first symptom; if the conditions are not adjusted immediately, the mold will return.

2. **Vermin:** If you feel your ductwork is plagued with vermin (rodents or insects) or if you reside in an area where this is a common problem, you should contact an HVAC professional for ductwork cleaning.

Make no try to remove the vermin on your own since this could be unsafe and perhaps hazardous to the rest of the household. If the problem appears to be severe, you may wish to contact pest control first.

3. **Ducts are clogged with excessive dust or debris:** If you notice dust or debris in the air within your home or suspect that there is a significant amount in your ducts, you should

get the ductwork cleaned or replaced. Before taking action, consult a specialist to ascertain the cause (s).

By cleaning your ducts of dust and particles, you may improve your air quality (which is especially beneficial for those who suffer from allergies). Your ducting will function more efficiently and without obstructions.

4. Ensure a long equipment life and optimal performance: Research on the impacts of duct cleaning has shown that it improves your system's efficiency. In the best-case scenario, consistently cleaning your HVAC system would result in cost savings from avoiding frequent and needless repair and replacement parts.

Proper care and easy, routine checks performed by a competent service will help you avoid more serious and long-term problems.

5. Improved distribution of warm and cool air: This final reason for routine ductwork cleaning is important, especially during the scorching summer months and the very cold winter months. By removing obstructions in your ductwork, you can significantly improve your home's comfort level when heating or cooling is required.

As long as you clean your HVAC ductwork regularly and see an expert rather than attempting to remedy a complex problem yourself, the likelihood is that your system will operate smoothly and save you worry and money in the long run.

Comparing rates and offers is important when selecting an HVAC service company. You may locate many qualified professionals in the field by consulting the yellow pages, conducting an online search or seeking assistance from friends and family.

Best air and heat LLC Company in LivingstonTX" has decades of experience in providing air duct cleaning, comprehensive HVAC system cleaning, water damage cleanup and repair and storm preparation.

Contact us at Best Air Conditioning & Heating, LLC. 3464 U S Highway 190 W.
Livingston, TX 77351 (936) 213-5116.

CHAPTER 7

How Long Will My HVAC System Last If Seasonal Cleaning Is Performed?

When the seasons change, homeowners often inspect their HVAC system to see whether it requires maintenance or replacement. Perhaps the heating expenditures were exorbitantly high during the winter, or the air conditioner failed to effectively chill the property during the summer's hottest days.

If you just purchased a home with an existing HVAC system, you might be unaware of the prior owner's compliance with required annual inspections and cleanings. Maintaining and cleaning your HVAC system regularly is important to ensure that it serves your family for many years.

To ensure that your budget adequately covers system replacement when the time comes, homeowners should have an idea of the typical useful life of an HVAC system.

Regardless of the equipment, no two HVAC systems are alike. If an inexperienced technician installs a highly qualified professional does one system and the other, there may be considerable variances.

HVAC systems must also be sized appropriately for the size of the home to operate at peak efficiency. Whether the owner cleaned the ducting regularly and replaced the filter as needed also affects the system's usable life.

Also, external influences come into play. If a home does not have appropriate insulation or the door and window seals are not properly sealed, the system will have to work more to heat and cool the home. This results in the system failing prematurely.

However, according to US Department of Energy figures, when all other factors are equal, the predicted life expectancy of an air conditioner is between 15 and 20 years. A furnace can last up to 20 years if fitted properly.

The important point is to take proper care of the HVAC system you have now to guarantee that it continues to offer reliable service to your family for the remainder of its useful life. Have it inspected, serviced and cleaned regularly to ensure that it operates at maximum efficiency.

Maintaining and Cleaning Your HVAC System

The good news is that a portion of your system may be cleaned and maintained by you. Take a look at the condensing unit. Remove any trash or dirt that has accumulated around the device.

Make this a routine part of your yard work and you'll assist ensure that your system continues to provide reliable service for an extended time. Replace your filter regularly, at least once a month in the winter. A clogged filter forces your system to work harder than necessary.

Also, it is important to plan an annual maintenance visit with your HVAC technician. They will determine whether your system works at peak efficiency through visual inspections and tests performed using state-of-the-art technology. Also, they will clean the ductwork and other spots that are difficult to reach on your own.

Regular maintenance and cleaning can help prevent minor issues from becoming major ones. You may help by planning your routine inspection and cleaning well in advance. That way, you'll only have to remember one thing. You can rest assured that your system will remain in excellent condition.

Replacement or Repair

The technician may identify issues that require repair or replacement during the inspection. Consider your budget to determine which alternative is the greatest fit.

If your HVAC system is ten years or older, replacing it with a new, energy-efficient model can be more cost-effective. You can save much money over time by replacing an inefficient unit with a more efficient one.

Maintain an eye on your new HVAC system. If you sell the home, be sure to inform the new owner of the home's age and maintenance history. In this manner, you or the next owner will set away funds to replace the unit when the time comes.

Choose a heating, ventilation and air conditioning specialist with years of experience designing high-efficiency HVAC systems. If you had your system inspected for a long time, contact your local HVAC specialist now. The specialist will advise you on the best course of action, allowing you to make an informed choice.

CHAPTER 8

Do's and Don'ts of HVAC System Maintenance Before Winter

It's no secret that HVAC systems require routine maintenance, particularly before the start of each season. Given that you've invested in an HVAC system, you want to ensure that you're getting the value for your money.

When the weather outside is particularly dreadful, your HVAC system normally works overtime to maintain an optimal internal temperature. Suppose you want to ensure that your system continues to operate smoothly. In that case, you must plan routine examinations and service maintenance to ensure no issues that require quick attention.

We'll look at some important HVAC maintenance advice in this chapter to guarantee your system operates smoothly throughout the coldest months of the year. These HVAC maintenance dos and don'ts will help you avoid skyrocketing energy bills and minimize the need for system repairs and replacements prematurely.

Ensure That Your Air Filters Are Inspected

Maintain clean air filters throughout the year, not only before the winter season, to avoid any airflow constraints. These restrictions can make your system work harder than necessary, increasing your energy bills.

Inspect and clean the air filters regularly, particularly in winter months and replace them as necessary. Because the thickness of the filter mostly determines filter longevity, you should refer to the manufacturer's instructions for any cleaning or replacement schedule issues.

Keep an Eye on Your Thermostat

You must develop the practice of checking your thermostat frequently. You should not leave your thermostat on when no one is there, as this is a waste of electricity. Also, it might result in clogged air filters and premature system failure.

Purify Your Air Ducts

There is no denying that mold, allergens and dust can accumulate in your air and heat ducts, which is why you should get them inspected regularly to ensure your HVAC system is operating effectively. This also contributes to the maintenance of indoor air quality.

Also, fall is the ideal time to check for obstructions in the air vents that are forcing your heating components to work overtime. Also, inspect the insulation surrounding the ducting since inadequately insulated ducts can contribute to heat loss, which is the last thing you want during the winter.

Ensure that you clean your vents and registers

Engage a professional to clean each register and vent in your space using a dust rag and a non-toxic cleanser, as they may rapidly become covered in dust and debris, obstructing airflow. Cleaner vents contribute to maintaining healthy indoor air and keep most allergens out of your indoor spaces.

It's important to schedule a comprehensive inspection of your HVAC system at least twice a year, preferably before the arrival of winter. Nobody likes to cope with a system failure while the outside weather is ferocious.

CHAPTER 9

Cleaning and Maintenance Tips for Humidifiers

Although most homeowners do not give it much thought, a humidifier is an integral aspect of your home's HVAC system. After all, the system's primary component is not the furnace or air conditioner.

The purpose of a humidifier is to prevent the air from getting excessively dry by adding moisture. Forced-air systems are part of the HVAC system and are installed directly in the furnace, where they function in concert.

Despite the fact that smaller units may be more cost-effective, because of the country's generally dry climate, every homeowner should have a forced-air system. Here are some guidelines to help you keep your humidifier in tip-top shape:

- Conduct a once-a-year cleaning of the unit. A humidifier can accumulate hard water stains and rust over a year. Once a year, you should disassemble and clean the unit. Consult your brand's owner's manual for precise instructions on how to clean it.

When you clean the device, you will very certainly need to replace the filter or pad because it will never be clean again. Consult a specialist for assistance with this step and/or the unit's general cleaning.

- After the season, clean the float assembly. At the end of the heating season, it is required to remove and clean the reservoir humidifier's float assembly. This will keep it from becoming stuck during the summer months when it is not in use. Vinegar is effective when it comes to cleaning this component of the humidifier.

- At least twice a year, clean the water reservoir. Anything that keeps water for an extended period is likely to harbor bacteria, which is why you should clean the reservoir twice during the season.

Antibacterial treatment will assist in eradicating any bacteria that have accumulated within the reservoir. Clean the reservoir at least twice during the season, if possible, to protect your family from bacteria that accumulate while the unit is in operation.

- Consult the manual for additional information on the exact type of unit placed in your home. There are many types of forced air units and some require considerably more care than those mentioned previously. Whenever you are unsure how to care for the unit, contact a professional who can assist you in keeping it in good working order.

The quality of tap water in your home also significantly impacts how often your humidifier will require maintenance. It may also affect the unit's operation.

For instance, water containing a high concentration of minerals can cause some types of units to generate white dust that blankets the entire residence. If you are experiencing white dust, look for ways to utilize distilled water and a humidifier cartridge designed to remove minerals from the water.

Additionally, homeowners must watch out for over-humidification. Mold and dust mites can become a serious issue in the home if the humidity becomes too high. There's also the possibility of humidifier lung, which is an inflammation of the lung caused by inhaling too much organic dust. Humidity levels between 30 and 50 percent are ideal for most houses.

Best Air and Heat LLC is a reputable service provider for the most popular HVAC brands in Texas. Contact us at Best Air Conditioning & Heating, LLC. 3464 U S Highway 190 W. Livingston, TX 77351 (936) 213-5116. <https://bestairandheatllc.com/>

CHAPTER 10

Cleaning and Maintenance of Pre-Insulated HVAC Ducts

Your ventilation, heating and air conditioning system or HVAC system is responsible for maintaining an appropriate level of indoor air quality. While they are more often associated with ventilation, these ducts also play an important role in air conditioning by providing thermal insulation. Also, they contribute to increased energy efficiency.

With these important functions and benefits, it is important to maintain their high quality. Most HVAC air ducts require very little cleaning. Indeed, the US Environmental Protection Agency believes that cleaning your air ducts is unnecessary unless there are unexplained symptoms, illnesses or allergies in the household or obvious evidence that the ducts are already dirty and contaminated.

However, even if such health hazards are not present, it is necessary to maintain your air ducts clean. This is not just about maintaining thermal comfort in your home; it is also about assuring everyone's safety.

Your entire family breaths the same air that comes from your HVAC system and it's far preferable to avoid any injury than to endanger your family's life due to improper air duct maintenance.

How can you know when it is time to clean them? The following are some telltale signs:

You sweep and dust the house more often than normal because it appears to be more difficult for you to eliminate dust. Even after cleaning, visible dust remains in the air.

At home, residents suffer from sinus congestion, nasal congestion and headaches during or after sleep.

It is very little or nearly no air entering the rooms of your house through the vents.

At home, residents are always ill or suffer from allergies more often than usual.

Sneezing, a runny or stuffy nose, exhaustion, nausea or a burning and dry sensation in the eyes, nose or throat are symptoms of illness experienced at home.

When you turn on the furnace or air conditioner, a musty or stale odor emanates from them.

Cleaning of pre-insulated HVAC ductwork

As with other forms of ductwork, the liners and boards of pre-insulated HVAC ducts can be easily cleaned with nonmetallic brushes. To avoid any damage caused by carelessness, a professional duct cleaner should undertake a thorough cleaning. He will remove all dust, cobwebs, calcium deposits, dirt and hair from the interior.

Ducts should generally be inspected (and cleaned as necessary) every one to two years.

CHAPTER 11

Is It Worth It to Clean Air Conditioner Ducts?

Duct cleaning is a misnomer; a comprehensive HVAC system cleaning is essential to optimize your AC system's air quality and energy efficiency (HVAC is an acronym for heating, ventilation and air conditioning).

How Duct Cleaning Affects the Efficiency of an Air Conditioning System

According to the EPA, a buildup of slightly more than four-tenths of an inch of dirt on cooling coils can result in a 21% reduction in coil efficiency. Nonetheless, duct cleaning by itself does not affect the cooling coils. The cooling coils are responsible for removing heat and moisture from the air in your home.

If they are not operating correctly, your air conditioning system will have to work harder, longer and consume more electricity to chill your home, not to mention that the air you breathe will pass over the dirt on these coils.

Cleaning the air ducts without addressing the coils is like cleaning the hose of your vacuum cleaner without emptying the bag; it's a complete waste of effort and money.

While your air ducts may be clean, your air handler (which comprises the blower, cooling coil and plenum box from which all ductwork originates) will continue to operate inefficiently, degrading the quality of your air.

Air conditioner duct cleaning, in our opinion, is not cost-effective. Your complete system must be cleaned to gain the benefits of improved indoor air quality and energy efficiency.

Your home's air enters your air conditioning system via the return grill, the huge vent with the filter within. The most commonly used fiberglass filters are just 7% effective at preventing dirt from passing through. If they are overly effective, they will also impede airflow to your air conditioner, requiring it to work more to chill your home.

The blower draws in air and forces it through the cooling coils. Moisture and heat are eliminated from the air as it comes into contact with the chilled coils. Moisture condenses on and runs down the coils, similar to how moisture condenses and runs down your bathroom mirror during a hot shower.

It is then injected into the exterior of your home. Since the coils are constantly moist, they gather up dirt in the air more quickly than on a dry surface and provide an ideal environment for microbial development.

The conditioned air is then transferred to your air ducts and AC vents via the plenum box. The blower, cooling coils and plenum box are all contained within one unit, referred to as the air handler. This is the core component of your air conditioning system.

All duct cleaning services are not created equal.

The issue is that businesses cannot access or clean these components in many areas unless they hold an HVAC license. This safeguards you against your system being accessed by someone who does not understand what they are doing.

Thus, an unlicensed duct cleaner is limited to reaching as far as possible from your AC registers in these states, leaving the rest of the system intact. As you can see, cleaning the ducts without also cleaning the air handler components is completely insufficient.

However, the cost of cleaning a whole HVAC system by a professional provider is well worth it, especially when contrasted to the cost of not cleaning it. According to the Louisiana Cooperative Extension Service, dust and filth are responsible for 9 out of 10

HVAC system failures. A dirty system must work harder and operate for a longer period than a clean system.

Add to that the EPA's finding that indoor air is 70% more polluted than outdoor air and that the average house gathers 40 pounds of dust each year (Discover Magazine). You can understand the important nature of system maintenance and cleaning

Points to Remember When Cleaning Ducts

If you're wondering whether air duct cleaning is worthwhile, the answer is yes but only if you keep three points in mind when selecting a duct cleaning firm.

To begin, do not waste your money cleaning the air ducts unless you want to have the entire AC system cleaned.

Not only does the air you breathe to pass through the air ducts but also via the blower fan, many rows of cooling coils (evaporator coils) and over the condensate pan. The evaporator coils are responsible for removing heat and humidity from the air.

Due to the chilled refrigerant running through the coils absorb heat from the air that passes over them, causing excess moisture in the air to condense on them and run into the condensate pan. Coils are especially dangerous in a humid climate like the one we have here in Houston, Texas.

Duct cleaning alone will not address the coils, prone to filth and debris buildup due to being wet when the system is operating, particularly in a humid area. If the entire system is not cleaned, in addition to

breathing air that has traveled over moist, unclean coils, you will have a less efficient air conditioning system.

The dirt insulates the coils, limiting their ability to remove heat and moisture from the air. Also, because the coils are many rows thick, dirt restricts airflow across the coils. To cool the air, your air conditioner must work harder and longer. Duct cleaning is worthwhile when combined with system cleaning.

Secondly, make sure you get a licensed company to clean your entire system.

Only a business licensed in HVAC (heating, ventilation and air conditioning) may access and clean your entire system in many states, including Texas. This is necessary to ensure that only authorized personnel has access to the internal workings of your air conditioning system. In Texas, a company without an HVAC license is limited to cleaning what can be reached through the registers in the walls and ceiling.

They cannot access crucial components of the system such as the coils but can also not clean the plenum, the box visible at one end of your AC unit that contains all the air provided to your home. That is equivalent to washing the filthy floor in your living room but leaving the doorway unwashed.

The dirt would find its way back into your living room. The same holds for duct cleaning. For example, Houston has many companies advertising air duct cleaning, but many lack Texas HVAC permits and hence cannot clean the full system. Take care who you employ to clean your air conditioning system.

Thirdly, only hire a business that adheres to the industry-wide approved standard of properly removing dirt from your AC system utilizing mechanical agitation and suction collecting gear.

This is closely related to the prior point, yet it is a distinct and significant issue. The suction devices must be powerful enough to trap the debris and maintain negative pressure throughout the system, ensuring that no debris escapes into the indoor environment or migrates to other components of your air conditioning system.

Have you noticed how hard it is to force open the doors of some restaurants when you are leaving? The huge kitchen exhaust fans draw air out of the building, ensuring that fumes exit the vent rather than into the dining area. The building's "negative pressure" attempts to close the door as you attempt to open it.

Similarly, a vacuum collection device places portions of your air conditioning system under "negative pressure." At the same time, it is being cleaned, ensuring that no loosened debris enters the environment or other components of your system. This is another reason you need a licensed company that can access all areas of your system and clean them while maintaining negative pressure.

This is also why inserting a vacuum hose with a revolving brush into your air ducts is not only insufficient but can also contaminate the air in your rooms and previously cleaned sections of the ductwork. Maintaining "negative pressure" in the system is crucial for safe and effective cleaning.

To summarize, if you are considering hiring a business to clean your air ducts, keep the following in mind:

1. Verify that they are cleaning the entire air conditioning system.
2. Verify that they are HVAC licensed and have the legal authority to access and clean your complete system.
3. Ensure that they maintain negative pressure on your air conditioning system while cleaning it to avoid cross-contamination between the system and the air in your rooms.

Air duct cleaning is worth the investment. It may help you save money and breathe easier if the entire system is cleaned properly by a professional provider, including maintaining negative air pressure in your AC system while it is cleaned.

Best air and heat LLC Company in Livingston, TX" has decades of experience in providing air duct cleaning, comprehensive HVAC system cleaning, water damage cleanup and repair and storm preparation.

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CHAPTER 12

Air Duct Cleaning - Often Asked Questions by Homeowners

While many households are becoming aware of the value of routine duct cleaning, you may still have concerns about the procedure. That is why we have developed a list of often asked questions concerning who should clean your ducts, why it is important and how it is accomplished.

"Why is it necessary to clean my air ducts?"

Dust, allergies, filth and other debris can accumulate in your ducts over time. Indeed, it can accumulate in layers up to three inches thick! This waste can harbor bacteria and promote mold growth, posing health risks to your family.

Also, when your HVAC system is turned on, some of these toxins are circulated throughout your home. Cleaning your air ducts eliminates this buildup of contaminants and significantly improves your home's air quality. You should get your ducts cleaned every four years to ensure safe, breathable air.

"How is my ductwork cleaned?"

Air duct cleaners scrape the dust, filth and debris from your ducts using specialized equipment and a negative airflow system (like a large vacuum).

The agitation forces the particles away from the duct walls and the vacuum prevents them from escaping into your home. Also, air washing furnace and air conditioner components, vacuuming registers and, if necessary, spraying mold inhibiting agents should be included in the cleaning.

"Who is responsible for cleaning my ducts?"

Only a competent duct cleaning service should be relied upon. These professionals possess the expertise and specific equipment necessary to completely remove all dust and debris from your ducting without causing damage or disseminating pollutants throughout your home.

The Environmental Protection Agency (EPA) recommends hiring only NADCA-certified specialists. NADCA certified specialists are highly trained, knowledgeable professionals who understand industry standards, proper ductwork cleaning processes, and environmental considerations.

"Will duct cleaning deteriorate the efficiency of my furnace or air conditioner?"

No: duct cleaners utilize specific tools and techniques to remove collected dust from your HVAC system without causing any damage to its components. Indeed, after a cleaning, your furnace and air conditioner will perform better: airflow will be increased, allowing your heating and cooling system to operate more efficiently.

"Since my home is brand new, I don't need duct cleaning, correct?"

Wrong! Construction is a messy operation and debris and drywall dust often find their way into your ductwork. This obstructs the airflow, traps additional dust and may promote mold growth. A thorough cleaning will remove any obstructions and collected dust, restoring your ducts to top condition!

"Will my home be less dirty if I clean my duct?"

Without a doubt! Since your heating and cooling system circulates dust from your duct throughout your home, removing that dust results in a cleaner environment.

"I don't need a duct cleaning because my new furnace is clean, correct?"

Wrong. Even though your new furnace is clean, dust remains in your ducts and, because your new furnace's fan is likely to be more powerful than your old one, all that dust and grime will be pushed directly into your rooms! Most HVAC cleaning specialists recommend that you clean your ductwork completely before installing a new furnace or air conditioner.

"Will duct cleaning alleviate my allergy symptoms?"

Almost certainly. Pollen, dust mites and other allergens and debris accumulate inside your ducts. Eliminating this debris should significantly reduce the allergen concentration in the air and alleviate your allergy symptoms.

Call your neighborhood air duct cleaning provider if you have any additional concerns about ductwork cleaning or want to arrange a duct cleaning. They will assist you with extra information and deliver better cleaning!

When do you know it's time to clean?

Many symptoms suggest that the HVAC ducts require HVAC duct cleaning service, including the following:

Furniture requires more sweeping and dusting than in past eras.

There is no dust-free zone.

Headache, weariness, irritability, sinusitis or congestion are all common problems regularly.

Inadequate airflow from vents

An increase in allergic reactions

When the air conditioner is turned on, a musty odor emanates.

Why routine cleaning is necessary.

This topic has no definitive answer because it depends on different conditions, including smokers in the household, household pets, water pollution, and allergy contamination. Indeed, duct cleaning is a need following a house renovation.

Which company should you hire to do the project?

The following are some of the criteria upon which one should base their decision:

The business must be established for an extended period.

The business must provide proof of insurance and license.

Individually, the company cleaned and inspected all air ducts and associated components.

The business must have all the necessary equipment to conduct the cleaning procedure efficiently.

How long should the process be expected to take?

The time required is dependent on different criteria, including the size of the home, the systems, the level of contamination and the availability of HVAC professional cleaners. At least two specialists must inspect within the estimated time frame. The company should provide an estimate for the work to the owners.

What method is utilized to clean the ducts?

Some companies utilize antimicrobial chemicals to clean the interiors and remove fungi, germs, and viruses. Before applying any of these chemicals, thoroughly clean the ducts. The antimicrobial treatment must be registered with the EPA in the United States.

What is the procedure for cleaning residential HVAC ducts?

The most effective method of cleaning a domestic HVAC system is to use Source Removal Methods. A forceful vacuum is used to apply negative pressure to the system.

The vacuum is mostly used to remove air from the system. Also, devices are inserted to remove debris from the system's inside. The debris is collected from the system via the vacuum's ducts.

The following are reminders for completely cleaning HVAC ducts. These actions will assist in containing filth and ensuring that the duct is cleaned as needed. Cleaning commercial or residential HVAC ducts is vital for employees, customers, and occupants' health and safety. Professionals in cleaning and restoration can be found online.

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CONCLUSION

Whether it's the searing heat of summer or dead of winter, a properly running HVAC system is necessary to provide a comfortable indoor environment. Rather than taking your HVAC systems for granted like most building owners and addressing issues only after they fail, you must take a proactive approach.

If you weren't aware, maintaining an appropriate HVAC maintenance schedule can help you save between 10% and 20% on your energy bills, regardless of outside weather.

I've compiled a concise guide on seasonal HVAC maintenance throughout the past few chapters. I've discussed the seasonal protocols that must be followed to guarantee that your system operates smoothly throughout the year.

Pre-season HVAC inspections can help you identify corrosion, leaks and corroded electrical connections in your unit, which can lead to larger equipment problems if not addressed immediately. It acts as a preventive maintenance technique, protecting your system from unanticipated breakdowns that could result in high costs down the road.

It's prudent to schedule seasonal maintenance close to peak service call times since HVAC technicians become extremely busy when summer temperatures reach all-time highs or bone-chilling winter comes.

It's worth noting that while procedures like checking for refrigerant leaks and replacing air filters should be conducted often throughout the year, there are a few that should only be completed periodically.

Depending on your agreement with your HVAC maintenance service provider, they may conduct a comprehensive system check that includes equipment and component cleaning.

Remember that you should negotiate what is included in the season maintenance package with your technician in advance. Summer requires you to shut off the water feed to the furnace humidifier and clear the area surrounding your air conditioning system.

Spring is the time to begin preparing your system for warmer weather to avoid last-minute examinations. Around fall, you should evaluate your attic's insulation and prepare your heating equipment for the upcoming cold months. During the winter, it's also important to check the carbon monoxide detectors battery.

Procedures for air conditioning maintenance may include the following:

- Inspecting and cleaning system controls
- Inspecting and cleaning coils
- Tightening electrical connections
- Replacing components that show symptoms of wear and tear
- Lubricating all moving parts
- Inspecting and cleaning blowers and fans
- Cleaning and replacing air filters

Procedures for maintaining a gas furnace system may involve the following:

- Inspecting and cleaning gas burners
- Inspecting and cleaning the ignition switch
- Inspecting and cleaning the flue

Properly maintaining your HVAC system and all of its components will extend its life significantly.

Regardless of the weather, HVAC system should accommodate all of your intended indoor temperature preferences.

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Start by visiting our website <https://bestairandheatllc.com/> to request a reliable air duct cleaning service that is licensed to handle the full work and immediately begins saving energy and breathing easier.