Ventilation and Air Conditioning

Cooling systems are designed to fit the demands of the local climate. Your ventilation and air conditioning system should be checked periodically and cleaned by a professional service company. Perform a trial run of your system well before the season when you will use it most.

AIR CONDITIONING SYSTEM

A residential air conditioning systems is comprised of an outdoor condensing unit and an indoor air handler, and is referred to as a "split-system." (A condensing unit only cools, it does not heat.) Your annual professional service call will include service on both the condensing unit and the air handler.

Condensing Unit

Important Information

- **Test Your System.** It is a good idea to run your system at least once before the periods of heaviest use, as it is not good for the system to be out of operation for long periods of time. Your air conditioning system should not be run when it is very cold outdoors. Refer to your manufacturer's maintenance instructions to verify the lowest outdoor temperature at which your system can be run without damage.

- **Be Practical.** Practical approaches, such as using window coverings, are an important part of your home's cooling system. For example, on hot days close drapes, blinds, or shutters to block sunlight. On sunny, cold days, opening your window coverings may help heat your home. Also, do not leave doors and windows open for significant periods of time when the cooling system is operating.
- **Use Vacation Settings While Away.** If you will be away from your home for more than a couple of days, do not completely shut off the system. The potential change in temperature and lack of airflow may cause condensation that may damage the home.
- **Freeze-up Condition Remedy.** Under some high humidity conditions, cooling coils may ice up, stopping the circulation of air through the system. Switch from the "cool" setting to "fan" until the ice melts; the air conditioning should function normally when turned back on.
- **Trim Landscaping Around the Unit.** Keep landscaping trimmed well away from the outside unit and condensate lines.
- **Do Not Run the A/C Fan Continuously.** During high humidity conditions, *do not* run the air conditioning with the fan set to run continuously. The fan should cycle on and off with the outdoor (condensing) unit. Continuous fan operation re-evaporates moisture from the cooling coil back into the house, raising the indoor humidity.
- **Humidity Control.** Set the A/C system thermostat to the "fan-auto" setting to allow the system to perform the best dehumidification.

Caution: Never close more than 30% of the registers in your home at one time. Reduced airflow will not only place strain on the HVAC fan unit, but can result in condensation and water damage in higher humidity rooms.

Warning: If you notice a gas odor, call your gas company immediately.

Recommended Maintenance Tasks	Frequency
Change/clean the air filter, typically monthly during high use seasons. For reusable filters, vacuum and wash with detergent and water; allow filter to air dry before replacing it.	Monthly or per manufacturer's recommendations
Clean the registers to keep them free of dust and debris.	Monthly

Recommended Maintenance Tasks	Frequency
Check the condensate drain lines to ensure that water is flowing freely.	Seasonally
Examine the condensate drain pan float switch to ensure it is mounted on the pan properly and that it turns off the A/C unit when the pan accumulates a significant amount of water.	Seasonally
Contact a professional service company to service your system.	Annually or per manufacturer's recommendations

Effects of Deferred Maintenance

Failure to properly maintain and properly use your cooling system may result in malfunction or premature failure. The air conditioning system cools and, to some degree, dehumidifies the air. Malfunction of the system may result in poor dehumidification and increased moisture in the home, resulting in moisture damage to your home or its contents.

AIR CONDITIONING CONDENSATE PIPES

The air conditioning condensate discharge pipes drain condensed water away from the A/C system. It must be checked periodically for clear flow to keep your system operating at maximum efficiency. Serious water damage to your home and its contents may occur as a direct result of an obstruction to the condensate line.

Know the locations of the primary and secondary condensate discharge pipes. They are usually white plastic pipes protruding through exterior walls. Water actively discharging from a secondary condensate pipe is an indication that the primary pipe is clogged. Have the primary line cleaned right away. The clogged pipe may cause water leakage, resulting in damage to other building components. An overflow switch may be installed on the secondary condensate discharge line to shut down the unit when water overflows into the secondary line. You may want to consider using algaecide tablets to inhibit biological growth which can lead to blocked drains and premature pan deterioration.

AIR FILTER

Learn the location of the air filter in your cooling system. The most common air filters are wall or ceiling units. Many air handling units have slots to insert filters into the air flow. Although it takes less than a minute to change the filter, this is one of the most commonly overlooked details. Clean filters provide an even flow of clean air within your home and reduce system operating costs. Clogged air filters can result in reduced airflow and colder supply temperature which may cause condensing units to automatically shut off, causing units to cycle excessively and reduce efficiency. Dirty filters can also cause streaking on the walls near vents.

Example of an Air Filter Location

Consult the manufacturer's documentation for the type and location of the air filter used in the system. Some filters are so tightly meshed that they actually starve the system of air. Ensure that the new filter is properly fitted so air is properly filtered and does not bypass the system.

BATHROOM EXHAUST FANS

Exhaust fans play significant role in your home's ventilation, and are installed in your bathrooms. The exhaust fans may have filters that need to be cleaned or replaced periodically. Refer to the manufacturer's documentation for information on the fans installed in your home.

Bathroom Exhaust Fan

Important Information

- **Use Fan While Showering.** Moisture and mildew problems can occur in any room where water vapor is present. In bathrooms, use the exhaust fan while showering in order to control indoor humidity. Proper use of the exhaust fans to control steam can help reduce the potential for mold growth in your shower and bathroom.
- **Disconnect the Power Before Servicing.** When filters or filter screening is part of your exhaust fan assembly, disconnect the power before servicing.

Quick Tip: Fixing a Noisy Fan

If fans become noticeably noisier over time and have otherwise been properly maintained, have them serviced by a professional.

Recommended Maintenance Tasks	Frequency
Clean reusable filters and screens with soap and water to remove dust or lint that may have accumulated.	Quarterly

Recommended Maintenance Tasks	Frequency
Replace filters.	Per manufacturer's recommendations
If your fans have exterior exhaust vents, inspect and clean the exterior hood or vent. Ensure that the back draft damper (flap) is clear and free moving.	Annually

Effects of Deferred Maintenance

Failure to maintain exhaust fans may result in decreased efficiency and performance, a shortened useful life, and decreased air quality in your home.

CEILING FANS

Ceiling fans are a feature that, when used in conjunction with your HVAC system, can help evenly distribute cooled or heated air throughout your home, resulting in lower utility bills.

Ceiling fans require periodic cleaning to keep them looking and working their best. Consult the manufacturer's recommendations for model-specific information and troubleshooting tips. Ceiling fans may require occasional tightening of the attachment hardware to prevent wobbling or noise during operation.

Ceiling Fan with Light Fixture

Caution: Do not use water, cleansers, harsh rags, or abrasives, as they may scratch or warp the fan blades. In addition, water may damage the motors and create the possibility of electrical shock.

Recommended Maintenance Tasks	Frequency
Clean the fan blades with a soft brush or lint free cloth to remove dust.	Periodically
Replace light bulbs in ceiling fan fixtures. Tighten the hardware and connections to prevent the unit from wiggling during use.	As needed

Effects of Deferred Maintenance

Failure to periodically clean and maintain the ceiling fans may result in a build-up of dust, a diminished appearance, or a decreased performance of the unit.

REGISTERS

Registers (or air vents) distribute conditioned air throughout your home. Room air returns to the heater and A/C through the return vents. For efficient airflow, keep furniture, drapes and other objects away from registers. The registers can be adjusted to provide the desired temperature for each room.

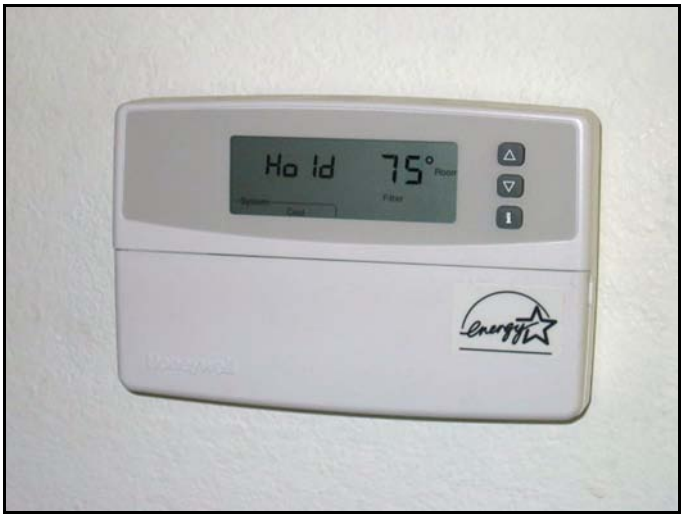
Adjustable Register

THERMOSTAT

Your thermostat controls the HVAC system, and allows you to set the temperature at which you want your home cooled or heated to. Set your thermostat to a setting comfortable for you and your family. To maximize energy efficiency, leave your thermostat at a constant setting to avoid energy-wasting fluctuations. Due to the demands of energy conservation, thermostats have become quite complex; familiarize yourself with the manufacturer's instructions.

Your thermostat has an integrated time delay feature that prevents manually starting the system repeatedly and protects the compressor from damage. When switching the thermostat to "ON", there is normally a delay of up to 15 minutes before the compressor will switch on.

Keep your home at an even temperature, especially in the first year, to minimize the expansion and contraction of the building materials. Minor cracking is inevitable but can be minimized by maintaining a temperature between 68°F–78°F.



Programmable Thermostat