

## **Optimizing your HVAC system**

**By Anita Gupta**

With the hot and humid summers and mild winters we experience in Texas, it is important to create a balance between comfort, energy use and energy cost. This can be done by optimizing or balancing your HVAC system in several simple and cost-effective ways. It is a win-win situation as you create a healthy, comfortable indoor environment for your family while saving money and energy in the long run.

### **WHAT YOU CAN DO:**

#### **SCHEDULE ANNUAL MAINTENANCE OF HVAC SYSTEM**

Get annual heating system maintenance service and air conditioning diagnostic tune ups one month before the season changes. By doing so, you are able to identify problems early. Also, simple tune up steps can balance humidity, carbon dioxide and allergen levels leading to a healthy, more comfortable environment. Click [energystar.gov](http://energystar.gov) for a maintenance checklist to ensure the service contractor performs all essential and typical steps.

#### **CHECK FILTERS**

Check your HVAC equipment filters every month and clean permanent filters or replace disposable filters if required. Typically, disposable filters need to be replaced every month. Dirty filters can block air circulation, damage your equipment and lead to early failure. Clean filters can reduce allergy symptoms and allow fresher air to circulate in your home.

For disposable filters, 3M has a Reminder Service to send you regular reminders to change your filters. Click on the following link to avail this FREE service: [solutions.3m.com](http://solutions.3m.com)

Consider using permanent filters. They are reusable, eco-friendly and a great option as they reduce the number of disposable filters going to the landfill.

#### **INSTALL PROGRAMMABLE THERMOSTAT AND FANS**

Programmable thermostats are very effective in micromanaging the temperature with “energy-saving setpoints” for the winter and summer. They can also be programmed temporarily to vary temperatures to make areas warmer or cooler. They are easily available at local home improvement stores and can lead up to \$100 savings in a year. It is important to call a certified HVAC contractor to handle safe and proper installation.

If you choose to keep your manual thermostat, set your thermostat to 78°F in the summer and 68°F in the winter—every degree of extra heating or cooling increases energy usage 6 to 8 percent. Setting your thermostat to a lower temperature than normal will not cool your home faster. On warm days, raise your thermostat to 80°F or higher if leaving your home for more than four hours.

Ceiling fans are a low-cost way to improve air circulation by optimizing the use of air-conditioned air and moving stale air out faster while bringing in fresh air.

#### **MAINTAIN CONDENSING UNIT**

Create a shade for your condensing unit and keep your condensing unit free of debris, shrubs and plants to allow for free circulation of air. Air conditioning misters make your AC run more efficiently by cooling the condenser with water vapor as it runs.

### **CAULKING DOORS AND WINDOWS**

Reduce air leaks by caulking, sealing and adding weather stripping all seams, cracks and openings to the outside. Simple steps like caulking and sealing the sheet rock around the valves for lavatory faucets can reduce air leaks.

### **INSULATE LIGHT SWITCH PLATES**

Prevent air draft or air leakage that occurs through your light switch plates by installing foam insulating gaskets. Home energy audits generally recommend using these insulation pads behind your plates as a way to create a seal around your devices. These are very easy to install and can be done by simply unscrewing the switch plate and placing foam pad over your device before replacing plate.

### **IMPLEMENT OTHER TIPS**

Use landscaping effectively as trees and shrubs can shade your home in the summer and serve as a wind block in the winter. Use shades or curtains to block the sun and heat during warm weather and open them to let the sun warm your home during cooler months. In warm weather, try to save heat and humidity-generating activities (cooking, laundering and dishwashing) for early morning and late evening.

As you implement these actions, watch your utility bills. Compare your energy usage with the amount used the same month in the prior year to track the impact of your actions.