What's new: 7 ways houses are getting better

SMART HomeOwner

JANUARY/FEBRUARY 2005
Issue No. 21
DISPLAY UNTIL FEBRUARY 28

Stress-Free ADDITIONS
Tips from architects

This old FRIDGE
It's costing you money

Homeowner's Toolkit
MUST-HAVES FOR THE UN-HANDY

Mold
What you don't know could hurt you

"Plan a home addition project modestly and look at your neighborhood values."
Bill Nowysz, Architect

Building 7 Better Home Innovations

These systems, technologies and products can make your home more efficient and comfortable

The beginning of a new year is a great time to evaluate your home and plan projects for the coming months. So what better way to start 2005 than by catching up on the latest developments in home systems and technologies? We've identified seven noteworthy innovations that can make your home a more efficient, more environmentally friendly and more comfortable place to live. From super-efficient heating systems, whole-house ventilation and environmentally friendly insulation to mold-resistant building products, modular and concrete building systems, and remote home automation control, these seven innovations are worthy of every homeowner's attention.

A resource list with contact information for the companies and manufacturers mentioned in this article is available on our website, www.smarthomeownermag.com.

Getty Images

7

Super-Efficient Heating Systems

Big changes are taking place in the home heating industry. New systems with higher efficiencies enhance energy mileage.

Geothermal systems, for instance, take advantage of the free and abundant renewable energy that is readily available in the shallow earth. EarthLinked heat pump systems from ECR Technologies enable the direct exchange of energy with the earth without the need to pump water through an intermediate heat exchange loop. The system typically operates in an efficiency range of 350 to 400 percent, which means it delivers 3.5 to 4 units of heat for every unit of electrical energy required to operate it. Installation is minimally invasive to the property. And because it's so quiet, it can be installed in a basement or utility room, out of sight and protected from weather.

Courtesy Northwest Geo

Another type of super-efficient heating system is a condensing boiler, which increases efficiency by extracting additional BTUs from the condensate within the system. The Summit by Laars Heating Systems, for example, is a low-water-content lightweight condensing boiler that achieves 96 percent operating efficiency. A sleek, direct-vented, sealed-combustion boiler that uses either natural gas or liquid propane, the Summit is ideal for baseboard, radiant-heat and hydro-air (water-to-forced-air heat exchange) applications in medium and large homes.

Even traditional furnaces, like the Affinity models from York International Corp., are achieving efficiencies of 90 percent and higher, thanks to their innovative designs. The Affinity furnaces feature stylish designs that incorporate single- or two-stage heat and advanced diagnostics for ease of installation and serviceability. The 90+ furnace is Energy Star–qualified.

John Vastyan

Courtesy ECR Technologies

TOP: Energy-efficient heating systems can cut costs while keeping homes warm in the winter.
ABOVE: The Earthlinked direct-exchange geothermal system uses refrigerant in copper tubing instead of a water loop to transfer heat efficiently.
LEFT: Installation of direct-exchange geothermal systems is minimally invasive to properties.