

# Energy-Saving Technology

## Ductless heat pumps offer comfort and savings

By Brenda Somes

Although ductless heat pump technology has been used for about 35 years internationally, it is a relatively new heating and cooling technology in the minds of many Americans. Ductless heat pumps have a reputation for providing a high level of home comfort and notable energy savings.

Ductless heat pumps consist of three parts: an outdoor compressor unit; at least one indoor air-handler unit that is wall- or ceiling-mounted; and a remote control to operate the settings.

Connecting the outdoor and indoor portions of the system is a refrigerant line that requires a 3-inch hole to the exterior of the house. As with other heat pumps, the system pulls available heat from the outside air to heat the home. To cool, the system reverses and releases heat to the outside air.

Unlike other heat pump systems, ductless heat pumps do not require ductwork

in the home to function.

Thomas Elzinga is the energy services representative at Consumers Power Inc. in Philomath, Oregon. He is among many professionals who champion the energy-savings potential of ductless heat pumps.

“As a small cooperative utility, we are dedicated to promote the best available technology,” Elzinga says. “It helps Consumers Power meet its ongoing goal of providing reliable, affordable power.”

“Ductless heat pumps are ideal because they are effective, reliable technology that promotes comfort and helps members see savings.”

Statistics from the Northwest Energy Efficiency Alliance based in Portland, Oregon, reflect 85,000 product installs in the Northwest. Elzinga says there were 110 installs in Consumer Power’s territory in the past 12 months. That is double the installations in the previous year.

“We’ve worked to get the word out to our members,” Elzinga says. “In conjunction with promotional efforts by NEEA, including the goingductless.com website, we’re educating folks.”

The home rental market has been slow to adopt the technology.

“We’ve often heard concerns about tenants remembering to clean filters,” Elzinga says. “And the upfront costs can be an obstacle for some landlords. But we have worked with some starting a proactive approach. They see they can retain tenants longer, attract more tenants and increase property value by installing a ductless unit.”

Dennis Sheldon, a building contractor and landlord in Monmouth, Oregon, is one such proactive landlord.

Ductless heat pumps represent an ideal opportunity to introduce comfort and energy savings to rentals and home remodels, he says.

“Many are so cost-conscious at construction they just want what costs less up front,” Sheldon says. “That’s typically using in-wall or baseboard heaters. But since I learned about the ductless systems, it’s all I tell people about.”

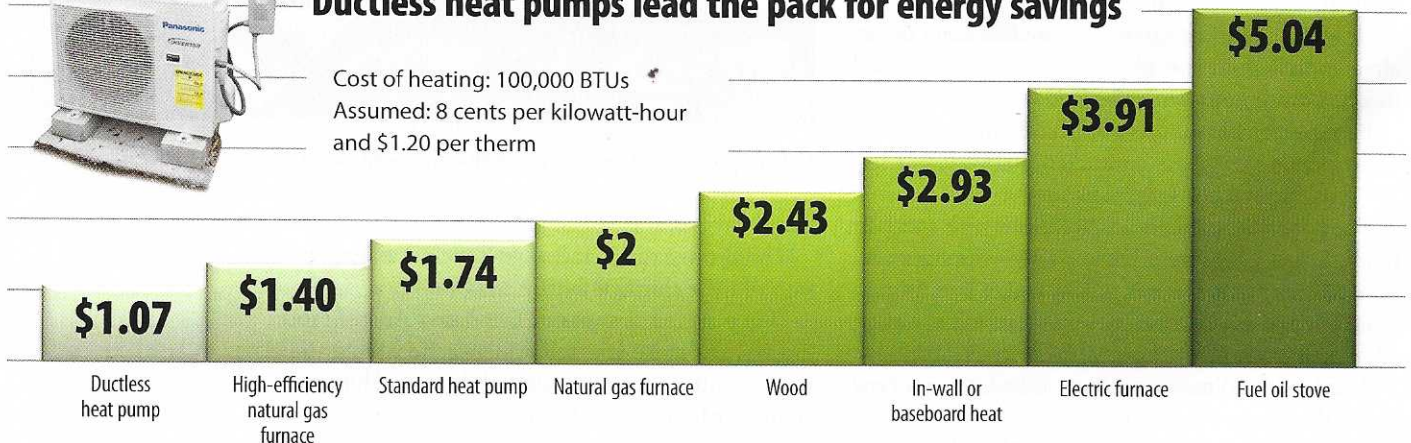
Sheldon’s experience with ductless heat pumps began in his own home.

“Before we had a DHP in our own home, my wife, Janet, and I had heater wars,” Sheldon says. “She would be cold and would turn up the heat. I’d be worried about the costs so I’d sneak behind



## Ductless heat pumps lead the pack for energy savings

Cost of heating: 100,000 BTUs  
Assumed: 8 cents per kilowatt-hour  
and \$1.20 per therm



Source: www.GoingDuctless.com



**From left, Dave Leterro uses the remote control to operate the ductless heat pump installed in the house he has been fixing up. Leterro stands beside the quietly running DHP compressor at the remodeled house. The home already has a buyer who is excited about the efficiency advantages of the unit.**

her and turn it back down. We were getting \$300 and \$400 power bills.”

After experiencing the savings and comfort level of a ductless heat pump, Sheldon installed them in six of his seven rental duplexes and houses. His tenants rave about how well the units perform, especially when it is extremely cold.

“One of my tenants tracked the house’s energy use before and after I installed the DHP,” Sheldon says. “They reported that energy use was cut in half and they are way more comfortable now. They were freezing before at twice the cost.”

“DHPs are relatively inexpensive—even better if you qualify for rebates. It just makes your place more rentable, especially when it adds humidity control, and air conditioning in summer.”

In Corvallis, Oregon, David Leterro of Stomping Grounds Management relates a similar story of his experiences with the technology.

“I do international development work,” he says. “My projects involve installing solar electric systems on schools in some West African countries. Sometimes the projects are in places that become dangerous or suffer serious disease outbreaks, so I wanted to work on some houses here until it’s clear to travel again.”

Like Sheldon, Leterro’s satisfaction with ductless heat pumps began in his own home.

“We bought our own home four years ago, and it needed a lot of fixing up,” Leterro says. “First we upgraded the attic insulation and then replaced the furnace with a ductless heat pump. From those measures we saw about a 40 to 50 percent savings. We had all the comfort of a furnace system at a fraction of the cost.”

Leterro and his wife, Carly, put their expertise to work fixing up a house to sell. He replaced the house’s baseboard and radiant ceiling heat with ductless

heating in December. During a February ice storm, the house was comfortable.

“The ductless heat pump is a major selling point to those who know what they are,” says Leterro. “I really wanted to offer someone a starter home that had all the efficiency in place.”

Leterro says some real estate agents hesitate to promote the units as selling points.

“Real estate people agree the heat pumps are awesome, but they caution that it’s really new technology and people don’t know about it yet,” he says. “Ductless heat pumps are everywhere in the developing world, yet here people treat it like some new, mysterious technology, though it’s tested and proven. For reliable comfort and huge energy savings, ductless heat pumps are it.” ■

*For more information on federal tax credits, go to [www.energystar.gov/index.cfm?c=tax\\_credits.tx\\_index](http://www.energystar.gov/index.cfm?c=tax_credits.tx_index). For credit and rebate information for any state, go to [www.dsireusa.org](http://www.dsireusa.org).*