



Improve Energy Efficiency with **ENERGY STAR** Natural Gas Heat Pumps

Builder Guide



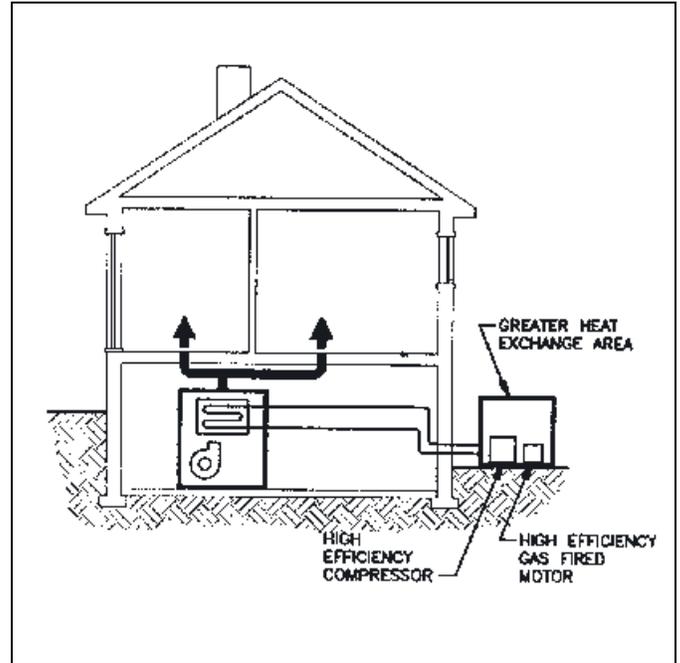
DESCRIPTION

A new type of residential heat pump is available that uses natural gas rather than electricity as its primary fuel source. The compressor is driven by a small natural gas combustion engine, instead of an electric motor. This new technology can be economical in many locations, particularly where natural gas rates are very low. These systems operate very inexpensively in the winter because they are over 30 percent more efficient than even the highest efficiency gas furnaces. This is because gas heat pumps burn fuel to drive the highly efficient refrigeration cycle that transfers heat between outdoor and indoor air, rather than for its heat content. Even in cold weather, this type of system can transfer more than twice the heat content of the fuel being used. These systems also use very efficient engines that reclaim much of the heat generated and add it to the heat transferred inside. Since natural gas is a clean burning fuel, these systems are among the lowest polluting systems available.



BENEFITS

Providing energy efficient houses with comfortable high efficiency heating and cooling equipment usually increases customer satisfaction, and can reduce callbacks and increase customer referrals. This can increase business and profits.



ENERGY STAR natural gas heat pumps save money.

A high-efficiency ENERGY STAR natural gas heat pump can reduce heating and cooling bills by 25 - 50% over a minimum efficiency gas furnace and air-conditioner system. For a typical household this can mean hundreds of dollars savings per year.

Natural gas heat pumps can provide improved comfort.

A gas heat pump can include sophisticated control and variable speed operation to provide improved comfort year round. The benefits include improved dehumidification in summer, and more even heating in winter.



INTEGRATION

- Properly sized HVAC equipment helps ensure energy efficiency and comfort.**

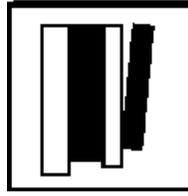
When combined with other home energy efficiency features such as increased insulation and tight construction, gas heat pumps can be right-sized for additional energy savings. Right-sizing can significantly reduce the added cost of gas heat pumps, because it results in smaller units that cost less. The key to achieving this additional benefit is accounting for energy efficient features and avoiding “rule-of-thumb” sizing techniques. See fact sheet on “Right Sizing HVAC Equipment” for more information.

- Duct systems should also be properly sized and sealed to reduce system losses.**

Duct system losses can be responsible for degrading the efficiency of any heating and cooling system by more than 20%, even high efficiency natural gas heat pumps. To get the most out of high efficiency natural gas heat pumps, a properly sized, tightly sealed and well insulated duct system should be installed. See “Right-Sizing Duct Systems” and “Duct Sealing” fact sheets.

- Informing home-buyers about maintenance requirements.**

It is critical that your home buyers are well informed of yearly maintenance requirements for gas heat pumps.



RESOURCES

- For more information on ENERGY STAR HVAC Program and qualifying equipment, call 1-888-STAR YES.
- ARI Directory of Certified Applied Air-Conditioning Products*, Air-conditioning and Refrigeration Institute, 1996. Available at 703-524-8800.
- American Gas Association*. Contact AGA for more information on natural gas heat pumps. 703-841-8556 or <http://www.aga.com>.