

# Through-the-wall condensing furnace

## DESCRIPTION

Through-the-wall furnace/AC packages are self-contained, vertical units with gas heating (on top) and electric cooling (on bottom) designed to be installed in individual units of multi-unit residential buildings. Condensing technology has been commercially available for single-family gas space heating equipment for decades, but has only recently been introduced in these popular heating and cooling packages used in multi-unit buildings. Four of the top five manufacturers of these packaged units now offer condensing heating technology in their product lines, achieving up to a 95% annual fuel utilization efficiency (AFUE) or thermal efficiency (TE) rating. These products are still early in the commercialization phase, but have the potential to deliver significant gas savings compared to conventional, non-condensing systems with an 80% AFUE/TE rating.

Through-the-wall units are typically installed in low- to mid-rise multifamily residences. They allow for individual utility billing and individual control of heating and cooling temperatures.



## DEMONSTRATING THE TECHNOLOGY

Through-the-wall furnace/air conditioner packages are suitable for multi-unit buildings, particularly small to mid-rise multifamily building, both apartments and condominiums. This equipment is applicable to both new and retrofit projects. Participants for testing and demonstrating this technology can be recruited through multifamily programs, including those targeting public housing authorities.

CRITERIA	VALUE
Gas savings	0.06 therms/ft <sup>2</sup>
Measure life	15 years
Carbon emissions avoided	4.07E-04 MT equivalent CO <sub>2</sub>
How it saves energy	The condensing furnace/AC package is 95% AFUE rated, which delivers conditioned air at higher efficiency than traditional 80% rated furnaces.
Non-energy benefits	Space savings, costs savings with packaged systems, individual occupant control (greater comfort)
Barriers to adoption	Early in the commercialization process.

## FOR MORE INFORMATION

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