

ABOUT CONDENSING FURNACES

Venting efficient furnaces is simple

Furnaces with efficiencies of 89% or above are “condensing” or “modulating-condensing” designs. Condensing furnaces use a secondary heat exchanger to condense water vapor in flue gases and capture heat that would otherwise be sent up the chimney.

Because flue gases are cooled, they can be direct-vented with plastic pipe rather than piped into a masonry or metal flue. The corrosive condensate from the heat exchanger is drained away. Modulating designs use automatic fuel valves to regulate the amount of fuel burned based on space heating demand. With the addition of variable-speed motors, these furnaces produce just the amount of heat that’s required, unlike less sophisticated designs with single- or two-speed blower motors.

Condensing furnaces are power-vented. They are usually equipped with a sealed-combustion burner that draws combustion air from the outside into a sealed chamber where it is burned. Sealed combustion eliminates the risk that combustion fumes can be pulled into the house when an exhaust fan (for example, a range hood fan) depressurizes the house.

