Section II- Roof Top Units (DX Unitary Packaged Rooftop Systems)

Summary:

- This 10-ton unit is rated at 12.2 EER.
- It has a heating input of 250 MBH and output of 175 MBH, or 80% AFUE.
- Heating efficiency is generally limited to 80% since condensing units have a risk of freezing.

Narration:

The white tube coming out of the building is the condensate line for the water vapor, and most likely used for air conditioning. If it were a condensing unit, converting the hot vapor into water, it would require a condensate line too. But in the wintertime, this condensate line would have a risk of freezing on the roof. There are some technical methods to prevent the water from freezing. As a general rule of thumb, however, rooftop units are generally 80 percent efficient.
Some roof top units are rather large. In open systems, outdoor air comes into the unit and return air enters through the building. Gas heating occurs in the coils. Cooling coils are also used to cool the air in the summertime, and the air can be heated with the next set of coils. Condenser coils are used to exhaust the heat out of the system. Heat is pumped from the cool coils and exhausted through the fan.

Think about your home cooling system on a hot summer day. If you go outside and put your hand over the condenser, you would feel hot air blowing. This is the heat that was removed from your house--cooling the house.