

**BASE Buildings Test Space HVAC Characteristics:** HVAC Configurations in Test Space

	Rooftop Units <sup>2</sup>	Air-Water Induction Units	Fan Coil Units	Unit Ventilators	Fin-Tube Radiator	Electric Baseboard (Heat)	Individual Room Packaged AC	Heat Pump Systems	Direct Evaporative Air Cooler	Other
Number of Test Spaces Having HVAC Configuration Shown <sup>1</sup>	12	2	11	2	31	3	29	3	1	80

Notes:  
<sup>1</sup> HVAC configurations as reported for all BASE building test spaces (n=100).  
<sup>2</sup> For example, data indicate that of the 100 BASE buildings test spaces, 12 test spaces were equipped with rooftop units. Similar logic applies to the other HVAC configurations shown.

Variable Descriptions:

**Test Spaces Having HVAC Configuration Shown** shows a breakdown of the types of HVAC systems and components serving the BASE test spaces. The following categories apply:

**Rooftop Units** are the central units located on the roof that cool or heat the air and then distribute it to the space or terminal boxes.

**Air-Water Induction Units** are terminal units that receive chilled or hot water from a central plant as well as ventilation air from a central air handling unit.

**Fan Coil Units** consist of a finned-tube coil supplied with hot or chilled water from a central source and a fan that circulates room air over the coil. These units are sometimes provided with an outdoor air connection through the exterior wall.

**Unit Ventilators** have components similar to fan-coil units except the units are usually larger and designed to provide up to 100% outdoor air via integral dampers. Since they are frequently installed as perimeter units, outside air is commonly introduced through the outside wall.

**Fin-Tube Radiators** are hydronic terminal units equipped with metal fins that dissipate the heat from the hot water in the piping through natural convection.

**Electric Baseboard** are electric terminal units that heat by electrical resistance and natural convection.

**Packaged AC Units** are factory assembled air conditioning units equipped with the ability to heat or cool. Cooling is provided using a direct expansion refrigeration cycle. Heating is generally provided using gas fired heat exchanger or electric resistance heating coils.

**Heat Pumps** are factory assembled units with the capacity to heat and cool. A single system can be used to condition an entire building or individual zones. Heat pump types include air-to-air, water-to-air, air-to-water, and water-to-water. Ventilation air may be supplied by a central system to the individual units through a system of ductwork or the individual units may provide ventilation.

**Evaporative Coolers (direct or indirect)** are non-refrigerant systems that cool air by exchanging sensible heat for latent heat, reducing temperatures, but raising humidity. In a direct evaporative air cooler, heat in the incoming airstream evaporates water from a wetted element or an air spray.

**Other** refers to any other HVAC configuration that is not otherwise defined.