



HVAC SYSTEMS LIST

Rev. 11/17/05

Rooftop Units

- **Constant Volume Single Zone** [1.1]
- **Constant Volume With Electric Reheat** [1.2]
- **Constant Volume With Hot Water Reheat** [1.3]
- **Constant Volume With VVT System** [1.4]
- **Variable Air Volume (VAV)** [1.5]

Make Up Air Units

- **Packaged Make Up Air Unit – 100 Percent Outside Air** [2.1]
- **Packaged Make Up Air Unit – Return Air Capabilities** [2.2]
- **Built Up Make Up Air Unit With Electric Heating** [2.3]
- **Built Up Make Up Air Unit With Steam Heating** [2.4]
- **Built Up Make Up Air Unit – Addition Of DX Cooling** [2.5]

Fan Coil Units

- **DX Cooling & Two-Position Hot Water Heating** [3.1]
- **DX Cooling & Modulating Hot Water Heating** [3.2]
- **DX Cooling & Staged Electric Heating** [3.3]
- **DX Cooling & Staged Gas Fired Heating** [3.4]
- **Two-Position Chilled Water Cooling & Hot Water Heating** [3.5]
- **Two-Position Chilled Water Cooling & Staged Electric Heating** [3.6]
- **Two-Position Chilled Water Cooling & Staged Gas Fired Heating** [3.7]
- **Two-Position “Dual-Temp” System** [3.8]
- **Modulating “Dual-Temp” System** [3.9]
- **Modulating Chilled Water Cooling & Staged Electric Heating** [3.10]
- **Modulating Chilled Water Cooling & Staged Gas Fired Heating** [3.11]
- **Modulating Chilled Water Cooling & Hot Water Heating** [3.12]

Built Up Air Handling Units – Single Zone Temperature Control

- **DX Cooling & Modulating Hot Water Heating** [4.1]
- **DX Cooling & Staged Electric Heating** [4.2]
- **Modulating Chilled Water Cooling & Hot Water Heating** [4.3]

Built Up Air Handling Units – Discharge Air Temperature Control

- **DX Cooling & Two-Position Hot Water Heating (For AM Warmup & Night Setback)** [5.1]
- **DX Cooling & Electric Heating (For AM Warmup & Night Setback)** [5.2]
- **Modulating Chilled Water Cooling & Two-Position Hot Water Heating (For AM Warmup & Night Setback)** [5.3]

Built Up Air Handling Units – Multizone Systems

- **DX Cooling & Modulating Hot Water Heating** [6.1]
- **DX Cooling & Staged Electric Heating** [6.2]
- **Modulating Chilled Water Cooling & Hot Water Heating** [6.3]

VAV Boxes

- **Cooling Only [7.1]**
- **Cooling With Electric Reheat [7.2]**
- **Cooling With Two-Position Hot Water Reheat [7.3]**
- **Cooling With Modulating Hot Water Reheat [7.4]**

Fan Powered Boxes

- **Cooling With Electric Reheat [8.1]**
- **Cooling With Two-Position Hot Water Reheat [8.2]**
- **Cooling With Modulating Hot Water Reheat [8.3]**

Reheat Coils

- **Electric Reheat Coil [9.1]**
- **Hot Water Reheat Coil – Two Position Control [9.2]**
- **Hot Water Reheat Coil – Modulating Control [9.3]**
- **Steam Reheat Coil – Two Position Control [9.4]**
- **Steam Reheat Coil – Modulating Control [9.5]**

Fans

- **Exhaust Fans (& Supply Fans) [10.1]**

Pumping Systems

- **Single Pump [11.1]**
- **Two Pumps With Manual Controls [11.2]**
- **Two Pumps With Automatic Controls [11.3]**
- **Three Pumps With Manual Controls [11.4]**
- **Three Pumps With Automatic Controls [11.5]**

Boilers

- **Hot Water Boiler – Single Boiler [12.1]**
- **Hot Water Boiler – Multiple Boilers [12.2]**
- **Steam Boiler – Single Boiler [12.3]**
- **Steam Boiler – Multiple (Two) Boilers [12.4]**

Chillers

- **Air Cooled Chiller [13.1]**
- **Air Cooled Chiller With Remote (Indoor) Evaporator [13.2]**
- **Condenserless Chiller With Remote Air Cooled Condenser [13.3]**
- **Water Cooled Chiller [13.4]**
- **Multiple Air Cooled Chillers [13.5]**
- **Multiple Water Cooled Chillers [13.6]**
- **Refrigerant Monitoring / Ventilation System [13.7]**

Steam to Hot Water Heat Exchangers

- **Single Valve Control** [14.1]
- **Dual Valve Control** [14.2]

Duct Mounted Humidifiers

- **Steam Utilizing** [15.1]
- **Steam Generating** [15.2]

Unitary Heating Equipment

- **Unit Heater – Steam or Hot Water** [16.1]
- **Unit Heater – Gas Fired or Electric** [16.2]
- **Cabinet Unit Heater – Steam or Hot Water** [16.3]
- **Cabinet Unit Heater – Electric** [16.4]
- **Baseboard Heater – Steam or Hot Water** [16.5]
- **Baseboard Heater – Electric** [16.6]

Computer Room A/C Systems

- **Air Cooled System** [17.1]
- **Tower Water System** [17.2]
- **Glycol Cooled System** [17.3]

Variable Frequency Drive Systems

- **Pressure Control of Fan Speed** [18.1]
- **Temperature Control of Fan Speed** [18.2]
- **Pressure Control of Pump Speed** [18.3]
- **Temperature Control of Pump Speed** [18.4]

Damper Control Schemes

- **Two-Position** [19.1]
- **Modulating** [19.2]

Valve Control Schemes

- **Two-Position** [20.1]
- **Modulating** [20.2]

Variable Frequency Drives

- **230 Volt Pricing** [21.1]
- **460 Volt Pricing** [21.2]

Damper Motors

- **Two-Position or Modulating Control [22.1]**

Hot & Chilled Water Control Valves

- **Two-Way Bodies, Two-Position Control [23.1]**
- **Three-Way Bodies, Two-Position Control [23.2]**
- **Two-Way Bodies, Modulating Control [23.3]**
- **Three-Way Bodies, Modulating Control [23.4]**

Steam Control Valves

- **Two-Way Bodies, Two-Position Control [24.1]**
- **Two-Way Bodies, Modulating Control [24.2]**

Motor Starters & Control Panels

- **Three Phase Motor Starters [25.1]**
- **Custom Built Control Panels [25.2]**

A/C Unit Alternating Systems

- **Primary / Backup Systems (each unit sized for the full load)**
 - **Units With Microprocessor Based Controls [26.1]**
 - **Staged Units – Single Point Control [26.2]**
 - **Staged Units – Two Point Control (Separate Operating & Failure Thermostats) [26.3]**
- **Lead / Lag Systems (each unit sized for half the load)**
 - **Units With Microprocessor Based Controls [26.4]**
 - **Single Stage Units [26.5]**
 - **Two Stage Units [26.6]**