

Steam and Water Vents

Selection Guidelines – Steam Vents

Steam vents are used in one-pipe steam heating systems. As such, steam vents are primarily replacement items. Information required for sizing and selection:

1. Type of service

Determine the type of service where the vent is to be installed.

- a) Radiator Vent
- b) Convector Vent
- c) Main Vent

Model Number	Radiator (Angle type)	Convector (Bottom Inlet)	Unit Heater	Mains	Thermostatic Vent (only)
1A	X				
1B		X			
3					X
4					X
4A				X	
8C					X
40	X				
41		X			
43		X			
45		X			
70A	X				
71A		X			
71B		X			
71C		X			
74			X		
75				X	
75H				X	
76				X	
500		X			
508		X			

2. System operating pressure

Determine the operating pressure of the steam system.

- (a) The rated operating pressure of the vent must be higher than the maximum operating pressure in the steam system. When the system pressure exceeds the vent operating pressure rating, the vent cannot open and air will remain in the system. Air in the system produces inefficient steam system operation.
- (b) On steam systems with pressures up to 125 psig, Thermostatic Traps such as Model 8C and 9C may be used as air vents.
- (c) Determine if the vent is to be installed in a vacuum system. The Model 76 Main Vent is for vacuum service. It should be used on systems with a vacuum pump or a vapor system with a coal or wood fired boiler. Systems converted from coal or wood fired to oil or gas should use non-vacuum vents such as the Model 75.

3. Connection size

Determine the NPT connection size where the vent is to be installed.

Steam and Water Vents (continued)

Selection Guidelines – Water Vents

Water vents are used in hydronic heating systems and chilled water systems to vent air out of the system. Information required for sizing and selection.

1. Type of service

Determine the type of service where the vent is to be installed.

- a) Radiator Vent
- b) Convector Vent
- c) Main Vent

Model Number	Radiator	Convector	Mains	Built-in Vacuum Check	Remarks
77	X	X			Small Systems
78			X	X	High Pressure
79			X	X	Low Pressure
790		X			Small Systems
791		X	X		Small Systems
792			X		Cast Iron Body
508	X	X			Moisture Type
550		X			Air Chamber

2. System operating pressure

Determine the operating pressure of the system. The rated operating pressure of the vent must be higher than the maximum system operating pressure. When the system pressure exceeds the vent operating pressure rating, the vent will remain closed and air will remain in the system.

3. Connection size

Determine the NPT connection size where the vent is to be installed.

4. Capacity

Vent capacity determines the speed that air is initially vented from the system. Once the system is initially filled with water, very little air should re-enter the system. Thus water vent capacity is relatively unimportant.

5. Additional features

The Model 792 water vent has a 1/4 NPT outlet in the cover. This allows the installation of a 1/4-inch gate valve for manual venting or testing of the vent.