



QUICK RESPONSE

Saving life and property through effective licensing, plan review, and inspection of fire protection systems.

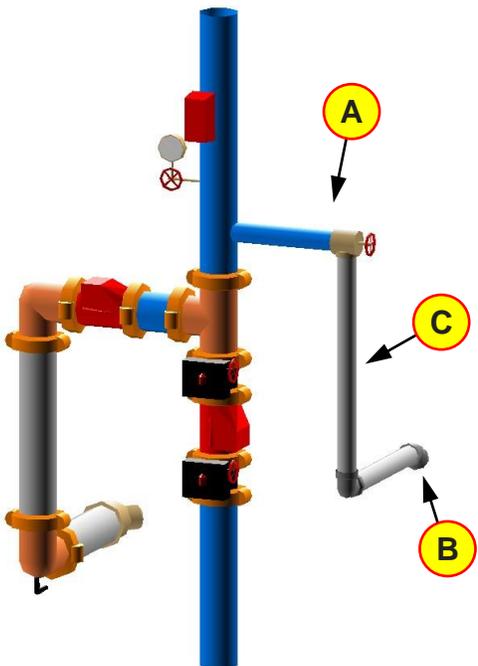
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Main Drain

In addition to valves that are used to control fire sprinkler system supplies, other types of valves are used to test the system and/or drain the system pipe. One such valve each fire sprinkler system is required to have is a **main drain** valve assembly **(A)**.

The **main drain** valve assembly is normally located at the system riser. Its purpose is twofold. First, it is used as a central point to drain water from the entire system. As such, where practicable, all system piping should be arranged to drain to the **main drain** valve. Its second purpose is to serve as a tool to measure incoming water flow. This is commonly referred to as the “**main drain test**.”

When fire sprinkler systems are to be taken out of service for any reason (e.g. maintenance, repair), properly sized and arranged drains help minimize the amount of time a system is out of service. Additionally, for systems installed in areas subject to freezing, proper drainage is critical due to the potential freezing of pipe after a system has tripped. The size of the **main drain** is relative to the size of the supply riser or main. NFPA 13 provides the specific size requirements for **main drain** valve assemblies.



Typical Wet Pipe System Riser

The **main drain** should discharge outside the building at a point free from the possibility of causing water damage or to a drain connection capable of handling the flow of the drain.

A **main drain** discharging to the atmosphere outside a building shall be fitted with a turned-down elbow **(B)**. The turned-down elbow minimizes the possibility of property damage and also discourages the use of the drain as a refuse receptacle.

When the **main drain** piping extends through a wall to the outside, subjecting it to freezing, not less than 4 feet of exposed drain pipe **(C)** shall be in the heated area between the **main drain** valve and the exterior wall.

Main drain valves shall be provided with permanently marked weatherproof metal or rigid plastic identification signs. The identification sign shall be secured with corrosion-resistant wire, chain, or other approved means.