Valves, a basic component of all fire sprinkler systems, play a multifaceted role. There are numerous types of valves that serve specific functions. This month control, check and specialty valves are discussed.

**Control valve** - A control valve’s function is to shut down the water supply to the sprinkler system. Control valves normally remain in the open position and are occasionally closed to allow for periodic system repairs, maintenance and modification. Control valves must be listed for use in fire protection systems and must have an external means to readily indicate that the valve is open or closed. Shown below are samples of numerous styles of valves which are available. NFPA 13 only requires that control valves be listed and indicating. Valves such as P.I.V. or wall post indicating are acceptable but not required. To prevent water hammer control valves shall not close in less than 5 seconds when operated at maximum possible speed from the fully open position.

**Check valve** – A check valve is a one-way directional valve that permits flow in one direction. The two most common locations of check valves are on the system riser, to prevent the backflow of sprinkler system water into the potable water supply, and on the fire department connection (FDC) piping to prevent the backflow of water out through the FDC. As with control valves, numerous styles of check valves are available. NFPA 13 requires that check valves be listed for use in fire protection systems. Although acceptable, detector check valves or double backflow prevention are not required by NFPA 13. Double backflow prevention is only required by the MN State Plumbing Code when there is a risk of cross-contamination with a non-potable source (i.e. lake, pond, etc.).

**Specialty valves** - Dry-pipe, preaction and deluge sprinkler systems require complex, special valves that are designed to hold water from the system piping until needed. These valves also include air pressure maintenance equipment and emergency operation/release systems. As with control valves and check valves NFPA 13 requires that specialty valves are listed for use in fire protection systems.