



Foam/Water Deluge Sprinkler System

When the detector (1) is activated by fire, a signal is sent to the VFR-400 Release Control Panel (2). The panel sends appropriate alarm signals and, at the same time, signals the release of the solenoid valve (3). The deluge valve priming chamber (4) is then vented faster than water is supplied through the restricted orifice (5), allowing the deluge valve to open. When the deluge valve operates, pressure opens the pressure operated relief valve (PORV) (6) continuously venting the water to the priming chamber, ensuring the deluge valve remains in the open position. Trim piping, tied into the priming chamber of the Halar-coated concentrate control valve (7), allows that valve to open at approximately the same time, opening the foam concentrate line to the sprinkler system. The outer shell of the bladder tank (8), pressurized by system water, squeezes foam concentrate out to the proportioner (9). As water flows through the venturi area of the proportioner, a metered pressure drop draws foam concentrate into the system water creating a foam solution mixed to the appropriate ratios. This solution then flows through the sprinkler piping and out to the open sprinklers or nozzles (10).