



Coffee Break Training - Fire Protection Series

Automatic Sprinklers: Hydraulic Nameplates

No. FP-2012-16 April 17, 2012

Learning Objective: The student shall be able to identify the information required to be printed on a fire sprinkler system hydraulic nameplate.

Most automatic sprinkler systems designed today have been hydraulically calculated: an engineered approach that matches the fire hazard potential to the available water supply pressure and volume.

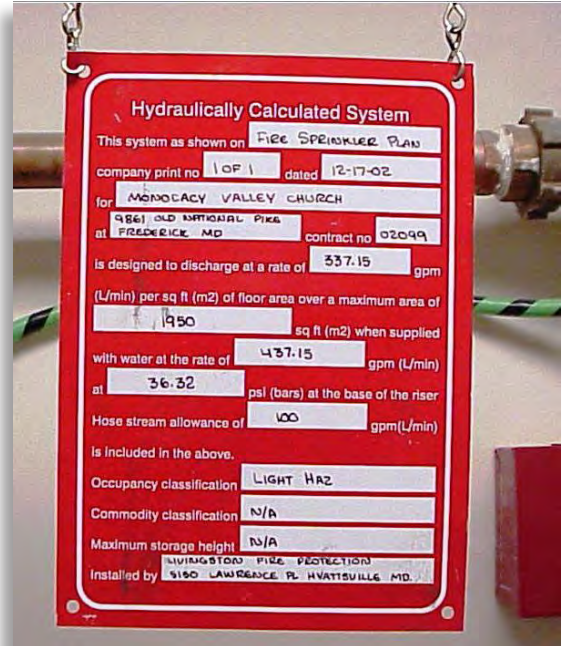
The sprinkler plans examiner will verify the hydraulic calculations to ensure that all of the design considerations have been met.

In order to help keep track of the design criteria, National Fire Protection Association (NFPA) 13, *Standard for the Installation of Sprinkler Systems*, requires that the installing contractor identify hydraulically designed sprinkler systems with a permanently marked weatherproof metal or rigid plastic sign secured with corrosion-resistant wire, chain, or other approved means. The sign must be placed at the alarm valve, dry-pipe valve, preaction valve, or deluge valve supplying the corresponding hydraulically designed area. (This sign is in addition to the general information sign described in Coffee Break Training 2012-13).

According to NFPA 13, the sign must have the following minimum information:

- The location of the design area(s). These are also known as the “hydraulic remote areas” and constitute the portion of the building and contents that are most challenging for the sprinkler system to protect. It is important to remember that the hydraulic remote area **may not** be the area physically most remote from the sprinkler risers.
- The discharge densities over the design area or areas. This is the amount of water that the design criteria specify are needed to control a fire in the hydraulic remote area. This value may come from NFPA 13 or the authority having jurisdiction (AHJ).
- The required flow and residual pressure demand at the base of the riser.
- Occupancy classification or commodity classification and maximum permitted storage height and configuration.
- Hose stream allowance included in addition to the sprinkler demand.
- The name of the installing contractor.

For additional information, refer to NFPA 13, Chapters 8 and 24.



This nameplate is typical of the style that should be found on a hydraulically calculated sprinkler system.



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