



QUICK RESPONSE

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

July 2010

DRY PIPE VALVE – EXHAUSTER

NFPA 13 (2002 edition) requires dry pipe systems to deliver water to the inspector's test connection within certain time limits. That basic time limit is sixty seconds. The system volume or gallon capacity is the basis for this requirement. Some larger dry systems can only meet this requirement with the aid of a **quick-opening device**.

For systems up to 500 gallons of capacity, there is no sixty second delivery requirement and therefore no need for such a device. For systems up to a 750 gallon capacity, the water must be delivered to the inspector's test within sixty seconds, or a **quick-opening device** must be installed. For systems that exceed 750 gallons of capacity, the water must be delivered to the test connection within sixty seconds. That usually requires the installation of one or both types of **quick-opening devices**. The two types are known as **accelerators** and **exhausters**. (Refer to the June 2010 **Quick Response** newsletter in regard to **accelerators**.)

An **air exhauster** serves a totally different yet complimentary purpose to the “**accelerator's**” purpose of opening a dry pipe valve in the shortest possible time. While the **accelerator** serves to neutralize the dry valve's pressure differential, thus speeding the trip point; the **exhauster** actually blows a two-inch stream of air out of the system (usually at a remote crossmain or branchline), causing the dry pipe valve to trip far sooner than had the air had to escape through one or two sprinkler heads. It should be noted that both devices, used independently or in tandem, should be equipped with anti-flooding devices to separate the air vs. water interface. Your 'special equipment' data sheets should point that out.

