



FACTORY MUTUAL TESTING OF SIDEWINDER™ SPRINKLER DROPS

Sidewinder™ sprinkler drops are FM approved under Factory Mutual Standard 1637, and have passed all tests for Factory Mutual approval and certification. The tests include the following:

- Fatigue
Sidewinder™ flexible hoses were bent in a “J” shape, and then filled with water to a pressure of 175 psi. Each hose was then flexed through a travel of 8” a total of 50,000 cycles. The samples were then pressurized with water to 70 psi for 5 minutes.
Results: No leaks occurred.
- Vibration
Sidewinder™ flexible hoses were mounted in mock suspended ceilings which were in turn attached to a vibration table. Each flexible hose was filled with water and pressurized to 90 psi. The assembly was then subjected to a series of vibrations for a period of 25 hours for a total of over 2.4 million vibrations. The vibrations ranged from 18 vibrations per second to 37 vibrations per second. After the vibration testing was completed, each hose was hydrostatically pressurized to 700 psi for 5 minutes.
Results: No leaks occurred.
- Pressure Cycling.
Sidewinder™ drops were subjected to 20,000 cycles of pressure varying from 0 psi to 175 psi. The samples were tested in both a straight position and in a 90° bent position. After completing the 20,000 cycles, the models were hydrostatically pressurized to 700 psi, with the pressure sustained for 5 minutes. *Results: No leaks occurred.*
- Vacuum
Sidewinder™ flexible drops were subjected to a vacuum of 25” mercury for a period of 5 minutes. Afterwards, each sample was hydrostatically pressurized to 700 psi, with the pressure sustained for a period of 5 minutes. *Results: No leaks occurred.*
- High Pressure Flow
Flow tests were conducted on Sidewinder™ flexible drops in order to test for rigidity of the mounting assembly. Sidewinder™ drops were mounted in a commercial T-bar suspended ceiling, with standard response automatic sprinklers installed in the sprinkler drops. Multiple tests were conducted at high flow with pressures ranging from 25 psi through 175 psi. *Results: Each mounting assembly remained in place and functional.*