



Water Hammer Arresters

Bulletin 46

Division of Building Safety and Inspection for 2015 I Codes

Important Information Regarding Water Hammer

Plumbing can make many weird noises, which can have many causes, and; sometimes, they are not easy to isolate and fix.

A Single Bang, Knock, Clunk or Clang

Such sounds are usually caused by a phenomenon called "water hammer". Water hammer does not accompany flowing water. Therefore, if your sound occurs while water is running, it is not water hammer.

Water hammer happens when you turn OFF a water flow suddenly like dishwasher, a clothes washer, a toilet or even closing a hand faucet suddenly. Shutting off the flow suddenly sends a pressure or shock wave down the water line shocking the pipes and creating the "hammer" noise. These shock waves travel faster than the speed of sound and can exert very great instantaneous pressures. Over time, water hammer can damage pipes, valves and eventually weaken pipe joints.

Most modern homes have devices called water hammer arrestors (they have been called various things such as air chamber, air cushion, water capacitor, etc.). Changes in the Uniform Plumbing Code no longer allow air chambers.

2015 Edition Uniform Plumbing Code

609.10 Water Hammer. Building water supply systems where quick-acting valves are installed shall be provided with water hammer arrester(s) to absorb high pressures resulting from the quick closing of these valves. Water hammer arrestors shall be approved mechanical devices in accordance with the applicable standard and shall be installed as close as possible to quick-acting valves.

609.10.1 Mechanical Devices. When listed mechanical devices are used, the manufacturer's specifications as to location and method of installation shall be followed.