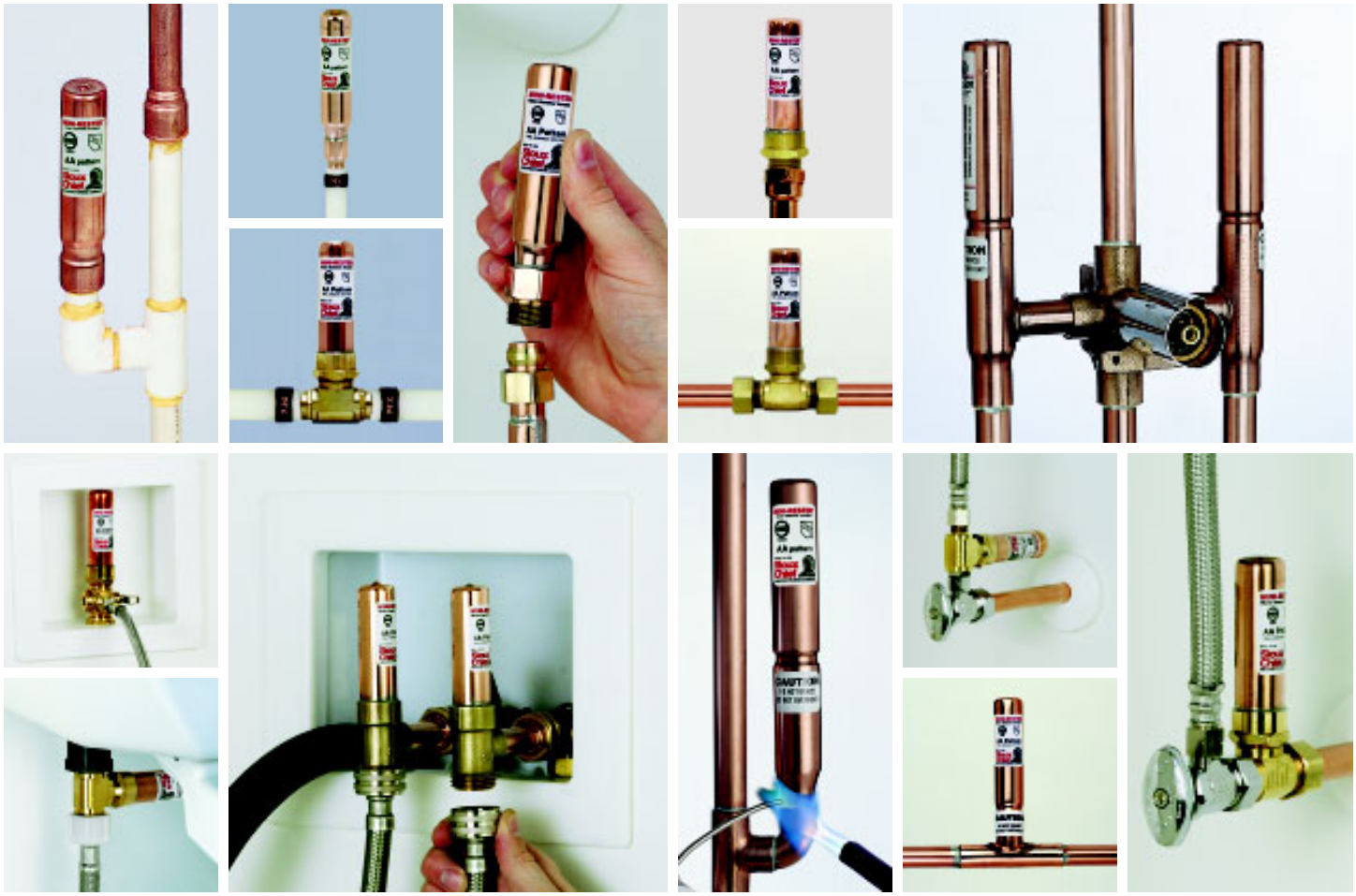
Mini-Rester™

Single Fixture Water Hammer Arrester

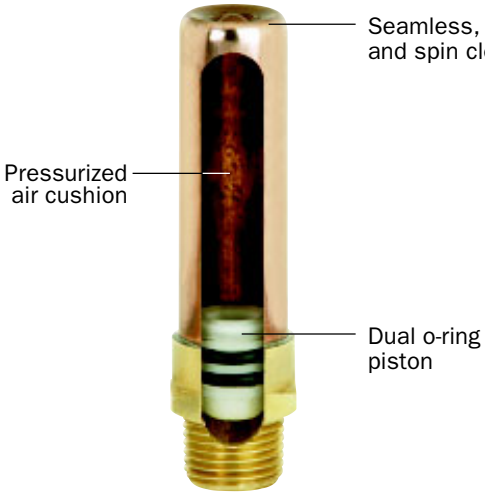


Your permanent, affordable solution to water hammer.

Listed by UPC/IAPMO to meet UPC-2003

Certified by ASSE to the ANSI/ASSE 1010-1996 Standard

IPC Conforms to IPC-2003



AA size

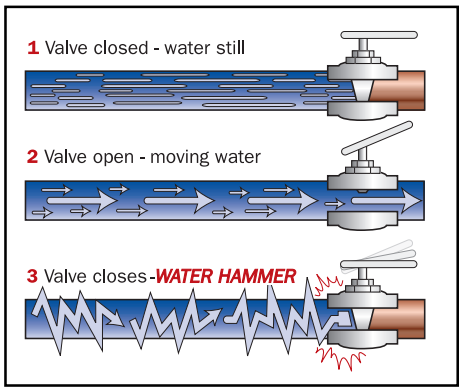
Sioux Chief Smart

Hangers & Brackets | Preformed Copper | **Arresters & Trap Primers** | Drainage Products | Plumbing Specialties

Sioux Chief

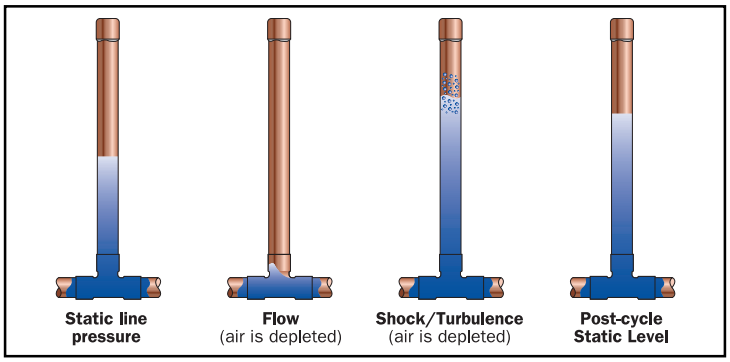
What is Water Hammer?

Although water hammer is a subject usually left up to plumbing engineers, the effects of water hammer must be dealt with every day by plumbing contractors everywhere. Water hammer is easily recognized by the banging or thumping noise that's heard when valves are shut off. Although this is an easy way to recognize the problem, water hammer doesn't always make these telltale noises. Water hammer occurs when the flow of moving water is suddenly stopped by a closing valve. This sudden stop results in a tremendous spike of pressure behind the valve which acts like a tiny explosion inside the pipe. This pressure spike reverberates throughout the plumbing system, rattling and shaking pipes, until it is absorbed. Normally, a sufficient pocket of air will absorb such a pressure spike, but if no pocket of air is present, expensive fixtures and appliances within the plumbing system will be damaged as they are left to absorb this pressure spike.

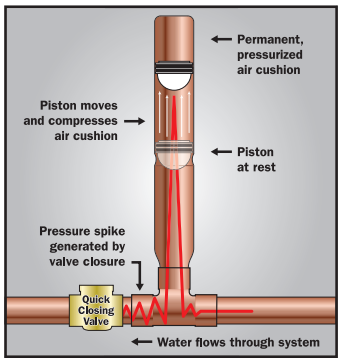


Why Air Chambers Don't Work

It used to be thought that an air chamber, or capped stand pipe, was an effective solution to controlling water hammer. However, within an air chamber, nothing separates the air from the water. It only takes a few short weeks before the air is absorbed into the water, leaving the air chamber waterlogged and completely ineffective. Laboratory tests confirm that the air is depleted by simple air permeation and by interaction between static pressure and flow pressure. In the diagram shown, (right) notice the difference in water level between "Static Line Pressure" and "Post-cycle Static Level."



Controlling Water Hammer



The most effective means of controlling water hammer is a measured, compressible cushion of air which is permanently separated from the water system. Sioux Chief arresters employ a pressurized cushion of air and a two o-ring piston, which permanently separates this air cushion from the water system. When the valve closes and the water flow is suddenly stopped, the pressure spike pushes the piston up the arrester chamber against the pressurized cushion of air. The air cushion in the arrester reacts instantly, absorbing the pressure spike that causes water hammer. Although arresters are typically tested to 10,000 cycles, Sioux Chief arresters have been independently lab tested to withstand 500,000 cycles without failure. All Sioux Chief arresters are guaranteed to control water hammer for the lifetime of the plumbing system.

For more information about water hammer control, check out our Engineer Report or Water Hammer FAQ. Call or visit our web site to request a copy.

National Model Codes

Both major National Model Codes require water hammer control in all residential and commercial water supply systems. Since 1997, both the Uniform Plumbing Code (UPC) sponsored by the International Association of Plumbing and Mechanical Officials (IAPMO) and the International Plumbing Code (IPC) sponsored by the International Code Council (ICC) have required water hammer control on all quick-closing valves. The AA arrester (Mini-Rester) is by far the most common approved device that satisfies these codes. Plain air chambers do NOT satisfy the requirements of either code. Many states across the country are now enforcing these arrester requirements, while many more are in the process of doing the same. With the Mini-Rester, code officials now realize proper water hammer control is permanent, affordable, and very feasible, even for residential applications.

UPC®

IAPMO — International Association of Plumbing & Mechanical Officials — Founded 1926

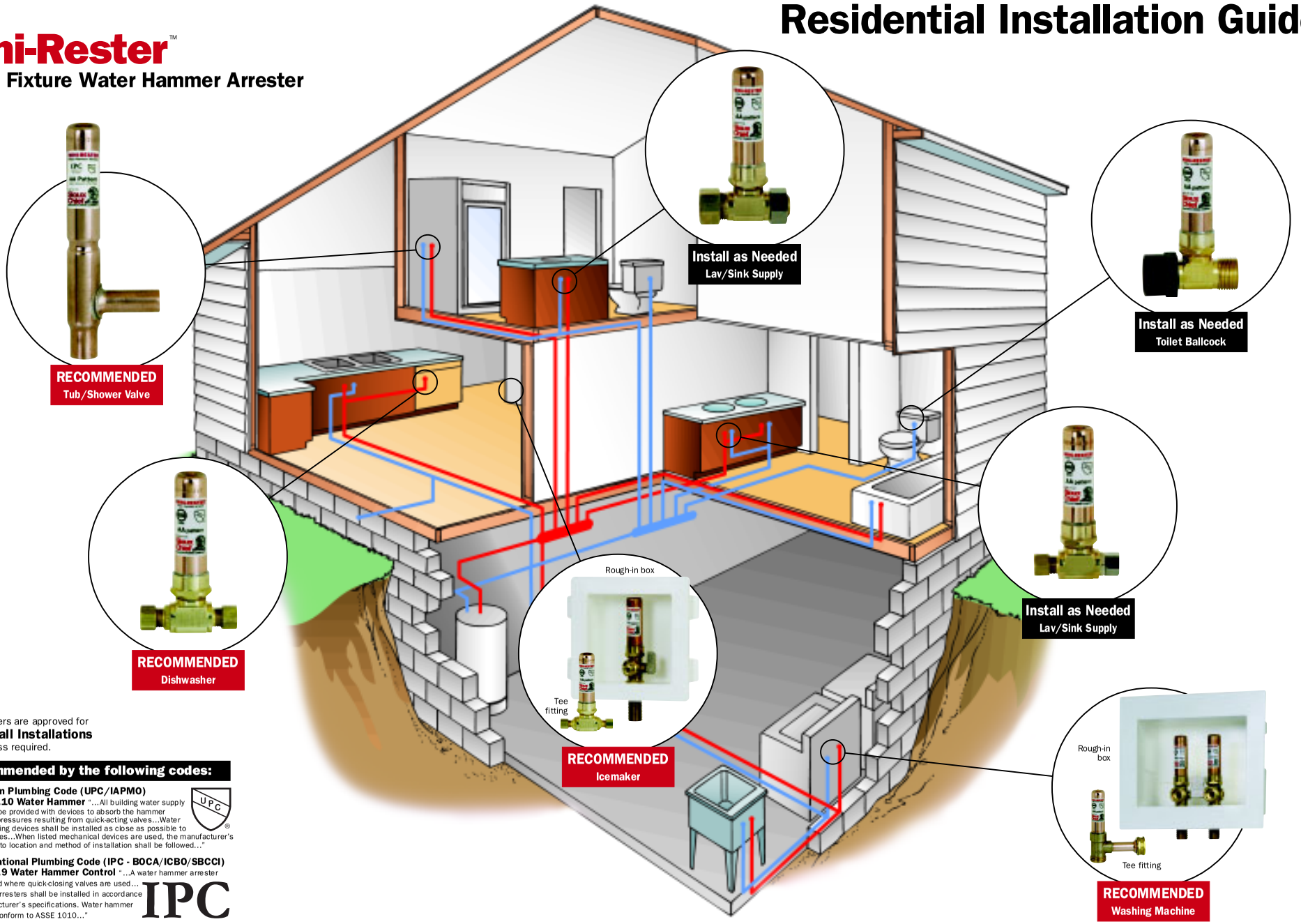
IPC

ICC — International Code Council®

Residential Installation Guide

Mini-Rester™

Single Fixture Water Hammer Arrester



All Mini-Resters are approved for
Sealed Wall Installations
with no access required.

Recommended by the following codes:

2003 Uniform Plumbing Code (UPC/IAPMO)
Section 609.10 Water Hammer "...All building water supply systems...shall be provided with devices to absorb the hammer caused by high pressures resulting from quick-acting valves...Water pressure absorbing devices shall be installed as close as possible to quick-acting valves...When listed mechanical devices are used, the manufacturer's specification as to location and method of installation shall be followed..."

2003 International Plumbing Code (IPC - BOCA/ICBO/SBCCI)
Section 604.9 Water Hammer Control "...A water hammer arrester shall be installed where quick-closing valves are used... Water hammer arresters shall be installed in accordance with the manufacturer's specifications. Water hammer arresters shall conform to ASSE 1010..."

The Mini-Rester™. . . Well Connected

No matter what your application, we have the connection you need.

Washing Machine
Install between laundry supply valves and hoses

Tub & Shower Valve
Sweats directly into hot & cold supply of mixing valve.

Stop Valve Connection
Unique fitting installs between 3/8" Compression stop and supply tube, or between stub out and 5/8" Compression stop

Male Sweat
Rough-in sweat anywhere in a system. 1/2" or 3/4" male swt.

1/2" Male Thread
New rough-in installations with 1/2" female thread fittings.

Straight Compression
5/8" OD is perfect for 1/2" nom. air chamber replacement.

Full-Slip Sweat Tee
1/2" Full-slip tee easily sweats onto any copper system.

1/2" CPVC
Easy rough-in or retrofit installation in any CPVC system

Compression Tees
Compression tees for 1/4" OD, 3/8" OD, & 5/8" OD

Ballcock Connection
Installs under tank between ballcock and supply tube

PEX Connection
Straight or tee pattern insert fitting for PEX systems

Available with MIP/FSWT, PEX, CPVC, or ProPEX connection

Laundry Box
Quality rough-in laundry box available with dual drain and single lever shut-off; or center drain with hot/cold shut-offs

Available with MIP/FSWT, PEX, or CPVC connection

Available with MIP/FSWT, PEX, CPVC, or ProPEX connection

Icemaker Box
Rough-in wall oulet box with arrester & quarter-turn shut off

ProPEX Tee
Barbed insert connection for ProPEX applications