

## SHOKTROL® INSTALLATION INSTRUCTIONS

All stainless steel Zurn Shoktrols incorporate advanced design bellows that absorb water hammer shock indefinitely, packing more shock absorbing capacity into less space than possible with conventional units or with outmoded "air chambers."

When a unit of equipment is located at the remote end of a long run of piping, the Zurn Shoktrol should be placed as close to the point of valve closure as possible. At this location, the Shoktrol will control any developed energy and prevent shock waves from surging through the piping system as shown in Illustration 1. Properly sized Shoktrols should be selected for such installations using Tables I-A and I-B (below).

### How To Properly Locate Zurn Shoktrols

#### Multiple Fixtures – Branch Line Less Than 20' Long (Illustration 2)

The preferred location for a Zurn Shoktrol is at the end of the branch line between the last two fixtures served when the branch lines do not exceed 20' in length, from the start of the horizontal branch line to the last fixture supply on this line.

#### Multiple Fixtures – Branch Line More Than 20' Long (Illustration 3)

On branch lines over 20' in length, use two Shoktrols whose capacities total the requirements of the branch. Locate one unit between the last and next to last fixture and the other unit approximately midway between the fixtures.

#### Multiple Fixtures – Extremely Long Branch Line (Illustration 4)

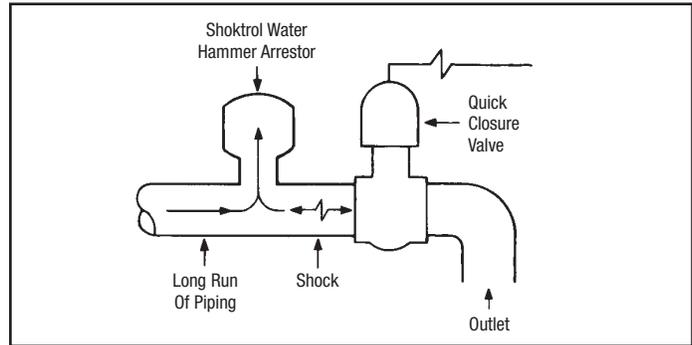
In unusual instances where a very long branch line is involved, the water supply is generally fed to some midpoint or other location on the branch line.

**Notes:** Zurn Shoktrols should always be mounted in a vertical position and installed on a horizontal water supply line (Illustration 1).

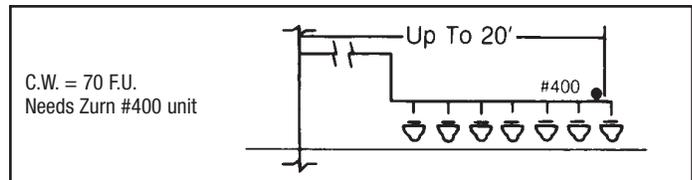
Shoktrol water hammer arrestors require no maintenance as their charge is permanently sealed and their internal working parts experience minimal wear due to the cushioning action of non-toxic mineral oil. Thus, if local plumbing codes allow, the Zurn Shoktrol may be installed in concealed locations without the need for access panels.

Failures can occur due to unforeseen circumstances and should this happen without access panels, the wall would have to be opened up and then repaired. Therefore, Zurn recommends that access panels be used.

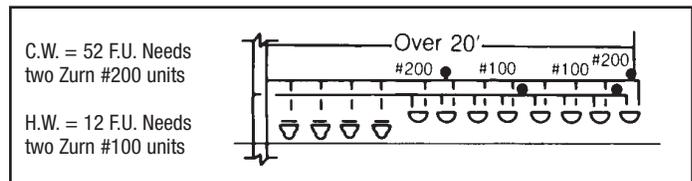
**Illustration 1: Remote Installations**



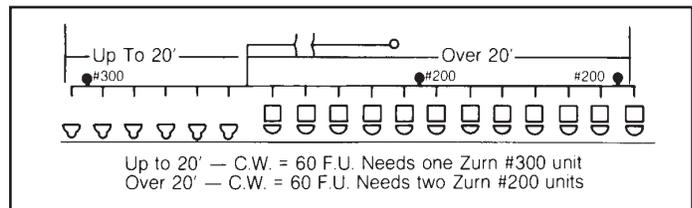
**Illustration 2: Example of P.D.I. Rule 1**



**Illustration 3: Example of P.D.I. Rule 2**



**Illustration 4: Example of P.D.I. Rule 1 and Rule 2**



**Table I-A. For Pressure Up To 65 psig**

Length of Pipe	Z1700 Series Zurn Shoktrol Water Hammer Arrestors Nominal Pipe Diameters					
	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
25	One #100	One #100	One #200	One #300	One #400	One #500
50	One #100	One #200	One #300	One #400	One #500	One #600
75	One #200	One #300	One #400	One #100 & One #500	One #600	One #500 & One #600
100	One #300	One #400	One #500	One #600	One #300 & One #600	Two #600
125	One #300	One #400	One #600	One #100 & One #600	One #500 & One #600	One #500 & Two #600
150	One #400	One #500	One #600	One #400 & One #600	Two #600	Three #600

For further sizing information, see "Plumbing & Drainage Institute Standard WH-201."

**Table I-B. For Pressure 65 psig to 85 psig**

Length of Pipe	Z1700 Series Zurn Shoktrol Water Hammer Arrestors Nominal Pipe Diameters					
	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
25	One #200	One #200	One #300	One #400	One #500	One #600
50	One #200	One #300	One #400	One #500	One #600	One #300 & One #600
75	One #300	One #400	One #500	One #600	One #300 & One #600	Two #600
100	One #400	One #500	One #600	One #300 & One #600	One #500 & One #600	One #500 & Two #600
125	One #400	One #500	One #300 & One #600	One #400 & One #600	Two #600	One #200 & Three #600
150	One #500	One #600	One #300 & One #600	Two #600	One #400 & Two #600	Four #600

For further sizing information, see "Plumbing & Drainage Institute Standard WH-201."