

WATER HAMMER ARRESTORS

LEHRY WATER HAMMER ARRESTORS is the term used to define the destructive forces, pounding noises and vibration which develop in a piping system when a column of non-compressible liquid flowing through a pipe line is stopped abruptly. The tremendous forces generated at the point of stoppage can be compared, in effect, to that of an explosion.

The LIV-WHA-001 Water Hammer Arrestors are designed to eliminate this effect. It features construction to comply with requirements.

Dishwashers, clothes washers, fast closing positive shutoff valves incorporated in the system all contribute to creating water shock which is not only annoying but damaging to pipes and appliances. It incorporates a precharged, permanent sealed air chamber to absorb the shock. The sealed chamber prevents the loss of air to the water and assures long and trouble-free life..

Features :

- ❖ BSP solid hex brass adapter or solder end connection for easy installation
- ❖ Approved for installation with no access panel required
- ❖ May be installed in new or existing plumbing systems with a standard pipe tee vertically, horizontally.
- ❖ Maintenance free – piston is the only moving part
- ❖ Air pre-load is 60psi (4.2 Kg/Cm²)
- ❖ Factory air charged and permanently sealed

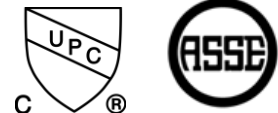
Pressure - Temperature

- Operating Pressure : Designed to operate on all domestic and commercial lines @ 150psi (10.6 Kg/Cm²) working pressure.
- Temperature Range : 33°F to 180°F (0.5°C to 82°C).

Materials

- Body : Hard drawn copper with custom internal mirror finish
- Piston : Teflon
- O-ring : (2) EPDM
- Threaded Adapter : **Brass**
- Seal Lubricant : Dow – Corning Silicone compound #111 FDA Approved for use in portable water system

Approved Standards



Sizing and Placement :

As shown, it has been established that the preferred location for the water hammer arrestor is at the end of the branch line between the last two fixtures served.

The location of the water hammer arrestor shown above applies to branch lines that do not exceed 20 ft. (6m) in length, from the start of the horizontal branch line to the last fixture supply on this branch line. When the branch line exceeds the 20 ft. (6m) length, an additional water hammer arrestor should be used. This practice is best defined by two rules which have been established to cover the placement of water hammer arrestors.

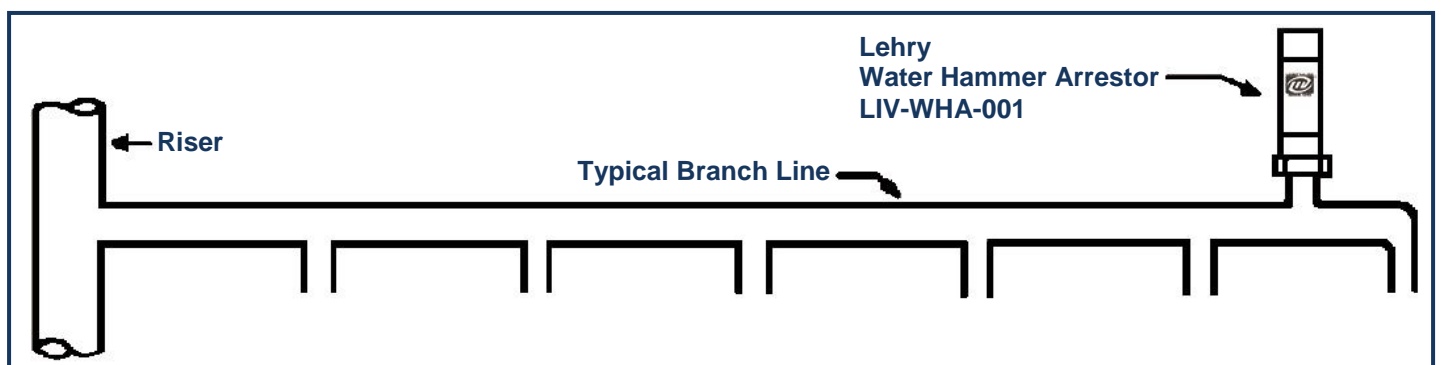
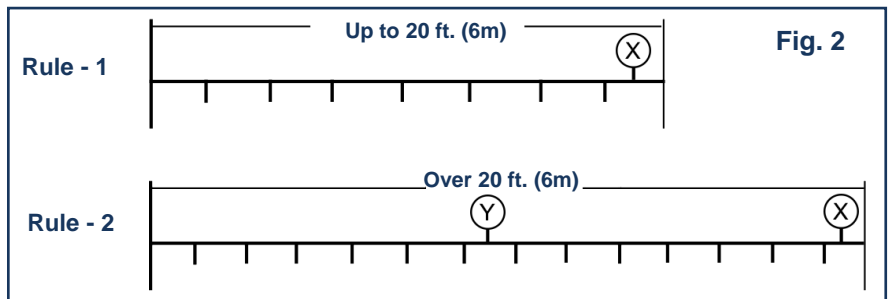


Fig. 1

Rule - 1 covers multiple fixture branch lines which do not exceed 20 ft. (6m) in length.

Explanation - Fixture-unit sizing and selection table is used to select the required PDI unit (water hammer arrestor).

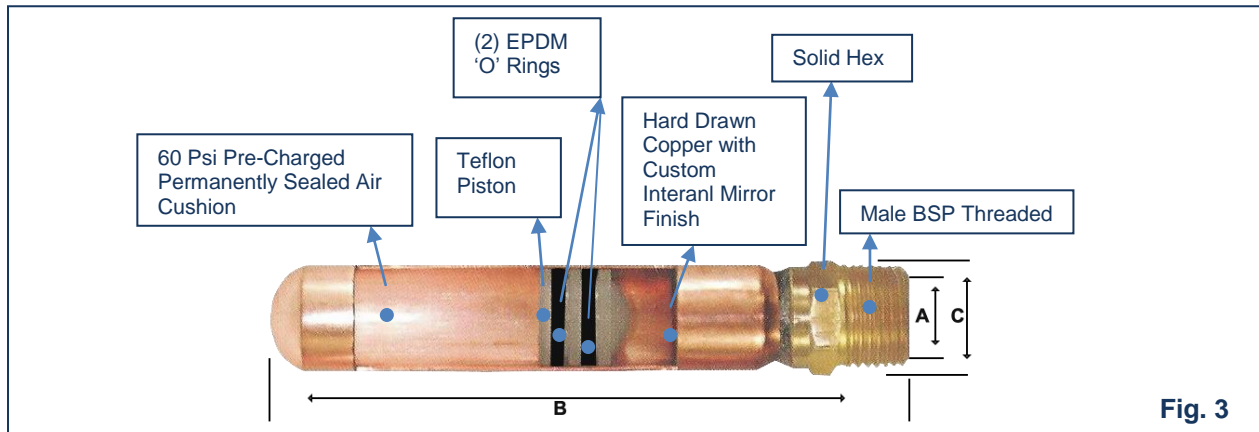
Rule - 2 covers multiple fixture branch lines which do exceed 20 ft. (6m) in length.



Explanation - Fixture-unit sizing and selection table is used to select the required PDI unit (water hammer arrestor). The sum of the fixture units rating of units X and Y shall be equal to or greater than the demand of the branches

FIXTURE UNIT SIZE

FIXTURE	Type Of Supply Control	Weight in Fixture - Units					
		Public			Private		
		Total	C.W. (Cold Water)	H.W. (Hot Water)	Total	C.W. (Cold Water)	H.W. (Hot Water)
Water Closet 1.66 PF	Flush Valve	8	8	-	5	5	-
Water Closet 1.66 PF	Flush Tank	5	5	-	2.5	2.5	-
Pedestal Urinal 1.06 PF	Flush Valve	4	4	-	-	-	-
Stall or Wall Urinal	Flush Valve 1.06 PF	4	4	-	-	-	-
Stall or Wall Urinal	Flush Tank 1.06 PF	2	2	-	-	-	-
Lavatory	Faucet	2	1 ½	1 ½	1	1	1
Bathtub	Faucet	4	2	3	2	1 ½	1 ½
Shower Head	Mixing Valve	4	2	3	2	1	2
Bathroom Group	Flush Valve Closet	-	-	-	8	8	3
Bathroom Group	Flush Valve Closet	-	-	-	6	6	3
Separate Shower	Mixing Valve	-	-	-	2	1	2
Service Sink	Faucet	3	3	3	-	-	-
Laundry Tubs (1-3)	Faucet	-	-	-	3	3	3
Combination Fixture	Faucet	-	-	-	3	3	3



Dimensions

(All Dimensions are in mm)

Item Code	Size		A (I.D)	B (H.D)	C (Hex)	Weight (Gm)	Fixture Units	PDI Standard
LIV-WHA-A15mm	1/2"	15mm	14.5	129	21	115	1 – 3	AA
LIV-WHA-15mm	1/2"	15mm	14.5	151	21	170	1 – 11	A
LIV-WHA-20mm	3/4"	20mm	19.5	185	27	248	12 – 32	B
LIV-WHA-25mm	1"	25mm	25	221.5	34	409	33 – 60	C
LIV-WHA-32mm	1 ¼"	32mm	33	259	43	755	61 – 113	D
LIV-WHA-40mm	1 ½"	40mm	39	283	49	940	114 – 154	E
LIV-WHA-50mm	2"	50mm	51	328	61	1140	155 – 330	F

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