

Dimensional data (inches and [mm]) are subject to manufacturing tolerances and change without notice.

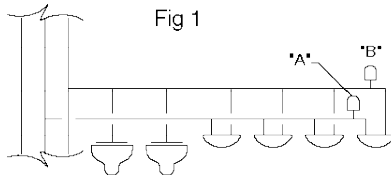
INSTALLATION

1. Flush lines thoroughly prior to installation of Model WH2950.
2. Determine size of Water Hammer Arrester based on fixture units then refer to charts for proper devices.
3. The Model WH2950 should be located as close to the source of shock as possible; one each on the hot and cold water lines. Use only Teflon tape to seal pipe threads.
4. To insure proper performance, the Model WH2950 should be installed so that there is an unobstructed path to the arrester.
5. Threading the Model WH2950 into the determined location should be done with an appropriate sized wrench on the hex only.

The fixture units shown in Table II represent the standard ratings used by engineers to size water distribution systems and are also used to size water hammer arresters. Match total fixture units to correct model of water hammer arresters required from Table I. All sizing data is based on flow velocities of 10 F.P.S. or less. The sizing method was designed with a maximum velocity of 10 F.P.S. to insure that the Water Hammer Arrester is capable of handling the shocks of maximum intensity that may be encountered.

EXAMPLE - Fig 1
C.W. =26 Fixture Units
Needs - 2950-B

H.W. =6 Fixture Units
Needs - 2950-A



LONG RUNS OF PIPING TO REMOTE EQUIPMENT

When long runs of piping are employed to serve a remote item of equipment, the Water Hammer Arrester should be located as close to the quick closure valve (see Fig. 4). The size and quantity of Water Hammer Arrester to be installed in branch lines is shown in Table III. Ideally, the flow pressure in branch lines serving fixtures should never exceed 55 PSIG. Pressure reducing valves should be installed to maintain proper pressure. When, however, flow pressures of 65 to 85 PSIG are used, the next larger size Water Hammer Arrester should be selected (see Table III).

TABLE III

FOR FLOW PRESSURES UP TO 85 PSIG												
LENGTH OF PIPE	Nominal Pipe Diameter											
	1/2"		3/4"		1"		1 1/4"		1 1/2"		2"	
	*	**	*	**	*	**	*	**	*	**	*	**
25'	A	B	A	B	B	C	C	D	D	E	E	F
50'	A	B	B	C	C	D	D	E	E	F	F	CF
75'	B	C	C	D	D	E	AE	F	F	CF	EF	FF
100'	C	D	D	E	E	F	F	CF	CF	EF	FF	EFF
125'	C	D	D	E	E	CF	AF	DF	EF	FF	EFF	BFFF
150'	D	E	E	F	F	CF	DF	FF	FF	DFE	FFF	FFFF

* Flow Pressures up to 65 psig
** Flow Pressures over 65 psig and up to 85 psig

WARRANTY: ZLC Light Commercial Water Hammer Arrestors are guaranteed against defects of material or workmanship when used for the services recommended. If in any recommended service, a defect develops due to material or workmanship, and the arrester is returned, freight prepaid, to ZLC within 12 months from date of purchase, it will be repaired or replaced free of charge. ZLC's liability shall be limited to our agreement to repair or replace the arrester only.

SIZING AND SELECTION

1. Determine number of fixture units from Table I.
2. Determine shock arrester size from Table II.
3. Finally, match arrester to size and length of pipe run from Table III.

TABLE I

MODEL 2950 (SIZES)	A	B	C	D	E	F
FIXTURE UNITS	1 TO 11	12 TO 32	22 TO 60	61 TO 113	114 TO 154	155 TO 330

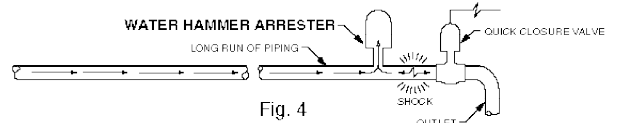
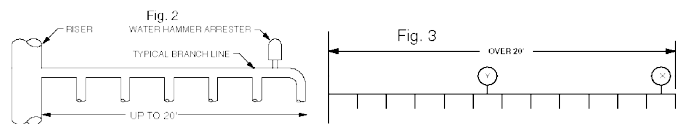


TABLE II FIXTURE UNITS SIZING INFORMATION

FIXTURE	TYPES OF SUPPLY CONTROL	FIXTURE-UNITS					
		PUBLIC			PRIVATE		
		Total	C.W.	H.W.	Total	C.W.	H.W.
Water Closet	Flush Valve	10	10	N/A	6	6	N/A
Water Closet	Flush Tank	5	5	N/A	3	3	N/A
Pedestal Urinal	Flush Valve	10	10	N/A	N/A	N/A	N/A
Stall or Wall Urinal	Flush Valve	5	5	N/A	N/A	N/A	N/A
Stall or Wall Urinal	Flush Tank	3	3	N/A	N/A	N/A	N/A
Laboratory	Faucet	2	1 1/2	1 1/2	1	1	1
Bathub	Faucet	4	2	3	2	1 1/2	1 1/2
Shower Head	Mixing Valve	4	2	3	2	1	2
Bathroom Group	Flush Valve Closet	N/A	N/A	N/A	8	8	3
Bathroom Group	Flush Tank Closet	N/A	N/A	N/A	6	6	3
Separate Shower	Mixing Valve	N/A	N/A	N/A	2	1	2
Service Sink	Faucet	3	3	3	N/A	N/A	N/A
Laundry Tubs (1-3)	Faucet	N/A	N/A	N/A	3	3	3
Combination Fixture	Faucet	N/A	N/A	N/A	3	3	3

MULTI-FIXTURE BRANCH LINES

- Rule 1 - Branch lines of 20 feet or less.**
Water Hammer Arrester should be placed at the end of the branch line between the last two fixtures served (see fig. 2). Select required model using fixture unit sizing.
- Rule 2 - Branch lines exceeding 20 feet.**
An additional Water Hammer Arrester should be placed as shown (see fig. 3). Select required models using fixture unit sizing. The sum of the fixture unit ratings of units X and Y shall be equal to or greater than the demand of the branches.



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