WATER HAMMER ARRESTOR SIZING

Single and Multiple Fixture Branch Lines

The water hammer arrestor sizing procedure for single and multiple fixtures described below conforms to that established by the American Society of Sanitary Engineers in their Standard ASSE-1010. Selection of the water hammer arrestor is based upon the total quantity of Fixture-Units on each cold and hot water branch line.

Fixture-Unit Listing

Determine the total number of Fixture-Units on each branch line by referring to the list of fixtures in Table One.

Water Hammer Arrestor Selection

Refer to Table Two and select the water hammer arrestor model with proper Fixture-Unit capacity. In long batteries of fixtures over 20 feet in length, more than one water hammer arrestor will be required.
(See placement data shown below.)

WATER HAMMER ARRESTOR PLACEMENT DATA

On multiple fixture branch lines up to 20 feet in length, the water hammer arrestor should be installed on the branch line between the last two fixtures being served. The water hammer arrestor should have a Fixture-Unit rating equal to or greater than the total Fixture-Units connected to the branch line.

On multiple fixture branch lines over 20 feet in length, two water hammer arrestors should be used on each line with the second unit placed at the approximate midpoint of the line. The sum of the Fixture-Unit ratings of the water hammer arrestors on each branch should be equal to or greater than the total Fixture-Units connected to the branch line.

Table One

Fixture	Type of Supply Control	Weight in Fixture Units			
		Public		Private	
		C.W.	H.W.	C.W.	H.W.
Water Closet	Flush Valve	10	-	6	-
Water Closet	Flush Tank	5	-	3	-
Pedestrial Urinal	Flush Valve	10	-	-	-
Stall or Wall Urinal	Flush Valve	5	-	-	-
Stall or Wall Urinal	Flush Tank	3	-	-	-
Lavatory	Faucet	1 1/2	1 1/2	1	1
Bathtub	Faucet	2	2	1 1/2	1 1/2
Shower Head	Mixing Valve	2	2	1	2
Bathroom Group	Flush Valve Closet	-	-	8	3
Bathroom Group	Flush Tank Closet	-	-	6	3
Separate Shower	Mixing Valve	-	-	1	2
Service Sink	Faucet	3	3	-	-
Laundry Tubs (1-3)	Faucet	-	-	3	3
Combination Fixture	Faucet	-	-	3	3

Table Two

Water Hammer Arrestor Model No.	A	B	C	D	E	F
Fixture Unit Capacity	1-11	12-32	33-60	61-113	114-154	155-330

NOTES:

(1) All sizing data in this book are based on flow velocities of 10 feet per second or less.
(2) When the static water pressure in the line exceeds 65 psig, contact the MIFAB Engineer Department.
(3) If the fixture-unit total has 1/2" fraction, it is to be "rounded-up" to the next larger whole number. If the total is 11 1/2 fixture units, use 12 fixture units.