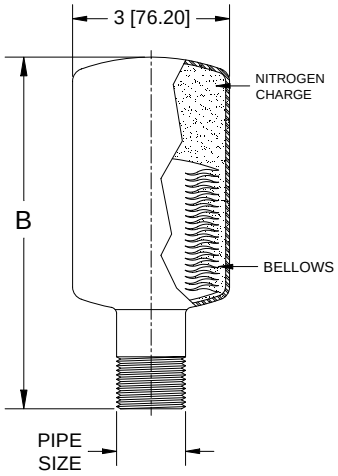
OPERATION, INSTALLATION AND MAINTENANCE INSTRUCTIONS
Shokstops (Water Hammer Arrestors)



CATALOG NUMBER	P.D.I. SYMBOL	FIXTURE UNIT RATING	PIPE SIZE	B
5	A	1-11	3/4" (19)	2 1/8 (54)
10	B	12-32	1" (25)	4 (102)
20	C	33-60	1" (25)	4 3/8 (111)
50	D	61-113	1" (25)	5 1/2 (140)
75	E	114-154	1" (25)	6 15/16 (176)
100	F	155-330	1" (25)	6 15/16 (176)

FEATURES

Wade Shokstops provide complete protection against water hammer in common pipe diameters for varying pipe lengths wherever flow velocity is subject to sudden change – in quick closing, solenoid-actuated valves used with lavatories, sinks, water closets, urinals dishwashers and washing machines. The Wade Shokstops may also be used in industrial applications for pumping units or similar installations where water flow is valved for intermittent operation.

OPERATION

Wade Shokstops have a shock-absorbing air cushion hermetically sealed within the unit. There is no loss of air and the units cannot become saturated. Stainless steel bellows style Shokstops are immune to attack and degradation by high levels of chloramine and other common waterborne chemicals which commonly degrade elastomeric components.

APPROVALS

Plumbing & Drainage Institute
ASSE (American Society of Sanitary Engineers)

PRESSURE and TEMPERATURE REQUIREMENTS

Maximum Working Pressure: 125 PSI
Maximum Static Pressure: 250 PSI
Maximum Temperature: 300 Degrees F

SIZING and LOCATION

Wade Shokstops should be installed as shown on mechanical engineering plans or in accordance with Plumbing and Drainage Institute Standard WH-201.

Shokstops should be installed in a vertical position only; 90 degrees up from horizontal as shown in Figure 1.

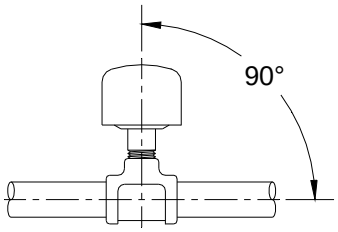
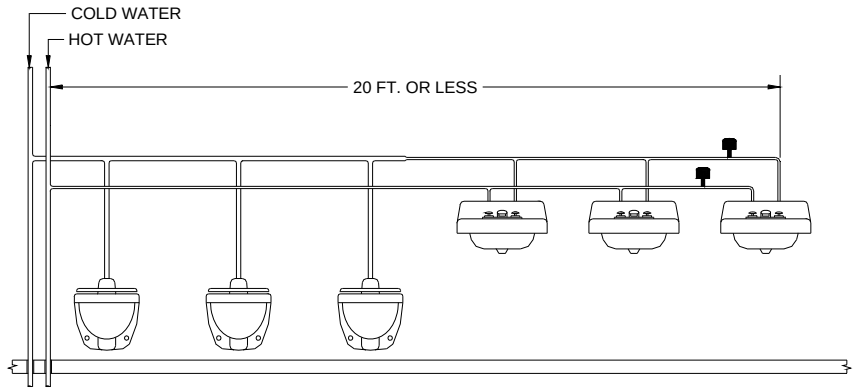


FIGURE 1

On multiple fixture branch lines up to 20 feet in length, the shokstop should be installed on branch lines between the last two fixtures being served. The Shokstop fixture unit rating must be equal to or greater than the total of combined fixture units connected to the branch line. See Tables 1 and 2 below.



On Mutiple fixture branch lines over 20 feet in length, two shokstops should be used on each line with the second unit placed at the approximate midpoint of the branch lines. The sum of the fixture unit ratings of the Shokstops on each branch line should be equal to or greater than the total of combined fixture units connected to the line. See Tables 1 and 2 below.

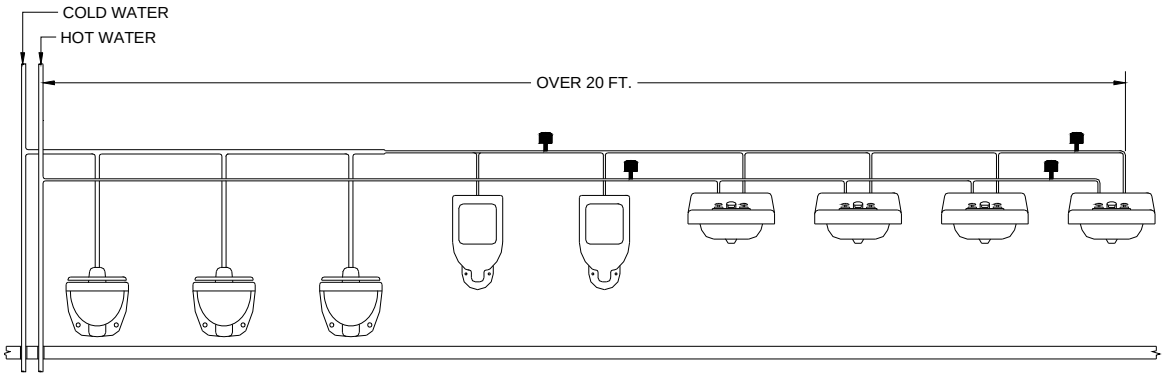


TABLE 1
For Pressures Up to 65 PSIG

Nominal Pipe Diameters

Length Of Pipe	½"	¾"	1"	1 ¼"	1 ½"	2"
25	(1) No.5	(1) No.5	(1) No.10	(1) No.20	(1) No.50	(1) No.75
50	(1) No.5	(1) No.10	(1) No.20	(1) No.50	(1) No.75	(1) No.100
75	(1) No.10	(1) No.20	(1) No.50	(1) No.5 & (1) No.75	(1) No.100	(1) No.75 & (1) No.100
100	(1) No.20	(1) No.50	(1) No.75	(1) No.100	(1) No.20 & (1) No.100	(2) No.100
125	(1) No.20	(1) No.50	(1) No.100	(1) No.5 & (1) No.100	(1) No.75 & (1) No.100	(1) No.75 & (2) No.100
150	(1) No.50	(1) No.75	(1) No.100	(1) No.50 & (1) No.100	(2) No.100	(3) No.100

TABLE 2
For Pressures 65 PSIG to 85 PSIG

Nominal Pipe Diameters

Length Of Pipe	½"	¾"	1"	1 ¼"	1 ½"	2"
25	(1) No.10	(1) No.10	(1) No.20	(1) No.50	(1) No.75	(1) No.100
50	(1) No.10	(1) No.20	(1) No.50	(1) No.75	(1) No.100	(1) No.20 & (1) No.100
75	(1) No.20	(1) No.50	(1) No.75	(1) No.100	(1) No.20 & (1) No.100	(2) No.100
100	(1) No.50	(1) No.75	(1) No.100	(1) No.20 & (1) No.100	(1) No.75 & (1) No.100	(1) No.75 & (2) No.100
125	(1) No.50	(1) No.75	(1) No.20 & (1) No.100	(1) No.50 & (1) No.100	(2) No.100	(1) No.10 & (3) No.100
150	(1) No.75	(1) No.100	(1) No.20 & (1) No.100	(2) No.100	(1) No.50 & (1) No.100	(4) No.100

TABLE 3
Fixture Unit Ratings

Fixture	Supply	Total (Public)	C.W. (Public)	H.W. (Public)	Total (Private)	C.W. (Private)	H.W. (Private)
Water Closet	Flush Valve	10	10	-	6	6	-
Water Closet	Flush Tank	5	5	-	3	3	-
Pedestal Urinal	Flush Valve	10	10	-	-	-	-
Stall or Wall Urinal	Flush Valve	5	5	-	-	-	-
Stall or Wall Urinal	Flush Tank	3	3	-	-	-	-
Lavatory	Faucet	2	1 1/2	1 1/2	1	1	1
Bathtub	Faucet	4	2	3	2	1 1/2	1 1/2
Shower Head	Mixing Valve	4	2	3	2	1	2
Bath Group (Closet)	Flush Valve	-	-	-	8	8	3
Bath Group (Closet)	Flush Tank	-	-	-	6	6	3
Separate Shower	Mixing Valve	-	-	-	2	1	2
Service Sink	Faucet	3	3	3	-	-	-
Laundry Tub (1 to 3)	Faucet	-	-	-	3	3	3
Combination Fixture	Faucet	-	-	-	3	3	3

SPECIAL INSTALLATION CONSIDERATIONS

Shokstops should not require maintenance. If however, it is desired to allow access, the Shokstop may be installed behind an access panel or the vertical piping may be extended to allow access from the suspended ceiling (see detail below).