



## PRESSURE VACUUM BREAKER

### Features

- Available in 1/2", 3/4", and 1".
- All bronze body for durability. One check valve and an air opening port in one assembly.
- Lightweight poppet seals air opening under minimum flow conditions.
- Simple service procedures. All internal parts serviceable in line from the top of the unit.
- Designed for minimum head loss.
- Engineered plastic bonnet and poppet protect valve bodies from freeze damage.

### Operation

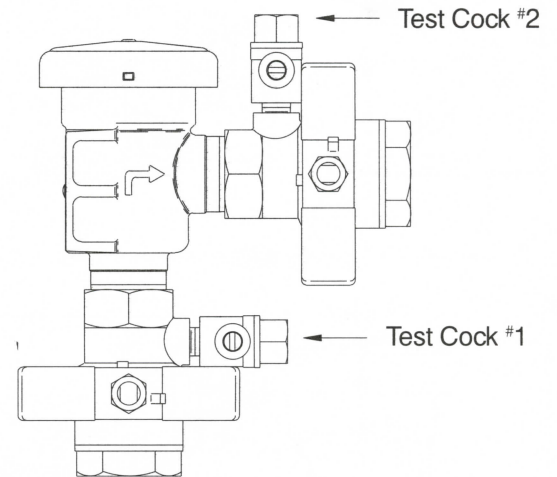
The Febco 766 PVB is designed to be installed to provide protection against backsiphonage of toxic or non-toxic liquids. It consists of a spring loaded check valve which closes tightly when the pressure in the assembly drops below 1 PSI or when zero flow occurs, plus, an air relief valve that opens to break a siphon when the pressure in the assembly drops to 1 PSI.

### Typical Specifications

Pressure Vacuum Breaker assemblies shall be installed to withstand pressure for long periods and to prevent backflow of contaminated water into the potable water system in backsiphonage conditions. The Pressure Vacuum Breaker assembly shall consist of a single spring loaded check valve which closes tightly when water flow through the assembly drops to zero, and a single air relief valve that opens to break the siphon when pressure drops to 1 PSI. The assembly shall include two resilient seated shut-offs and two resilient seated test cocks, considered integral to the assembly. Assemblies must be factory backflow tested. The check valve and air inlet valve must be constructed to allow in-line servicing of the assembly. The valve body shall be constructed of bronze. The check, poppet and bonnet assembly shall be constructed of engineered plastic to protect the valve body from freeze damage.

Pressure Vacuum Breaker assemblies shall be installed a minimum of 12" above the highest downstream outlet, or the highest point in the downstream piping. The assembly shall be rated to 150 PSI working pressure and water temperature from 32°F to 140°F.

Pressure Vacuum Breaker assemblies shall be Febco Model 766 or prior approved equal.



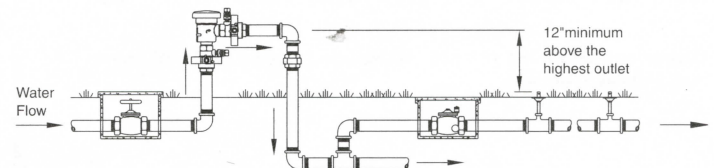
### Typical Applications

PVB assemblies are used to protect against health hazard and non-health hazard backsiphonage conditions in industrial plants, cooling towers, laboratories, laundries, swimming pools and lawn sprinkler systems.

### Installation

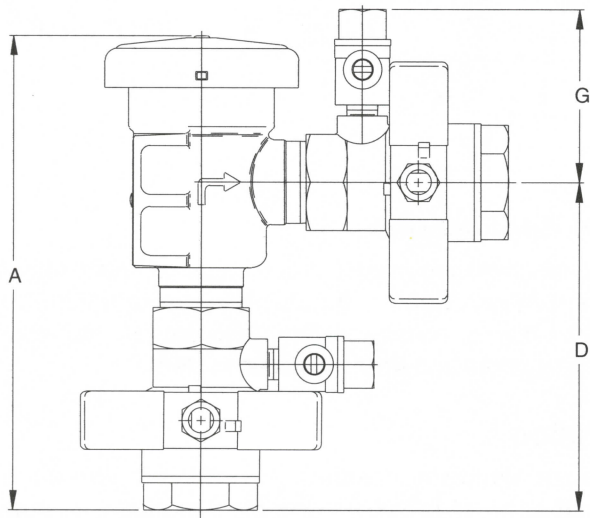
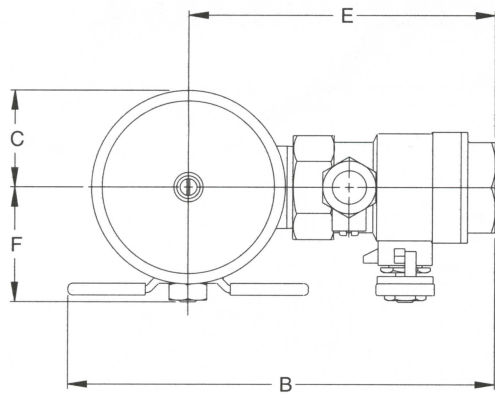
Pressure Vacuum Breaker assemblies should be installed at least 12" above the highest piping or outlet downstream of the assembly to preclude back pressure. Assemblies should be installed so they are easily accessible for maintenance, periodic testing, and where discharge will not be objectionable. They should be protected from freezing. If the assemblies are subject to freezing temperatures, the freeze protection procedures outlined in "Service Instruction Freeze Protection Model 766" must be followed. Assemblies must not be installed where backpressure could occur.

The system or line pressure at the #2 testcock shall be above 5.0 PSI to insure seating of the spring loaded air inlet poppet.



Thermal water expansion and/or water hammer down stream of the backflow preventer can cause pressure increases. Excessive pressure should be eliminated to avoid possible damage to the system and assembly.

## Dimensions and Weights (with ball valve shut-offs)



(U.S. - Inches)

SIZE	A	B	C	D	E	F	G	Lbs
1/2	6	5 1/6	1 1/4	4	3 7/8	1 4/9	2 3/8	2.4
3/4	6 2/7	5 3/4	1 1/4	4 1/4	4 1/6	1 5/8	2 3/8	3.0
1	7 2/7	6 1/2	1 2/3	5	4 3/4	1 6/7	2 3/7	5.0

(Metric - MM)

SIZE	A	B	C	D	E	F	G	Kgs
12	153.2	131.6	32.0	101.6	98.6	36.6	60.5	1.1
20	159.5	146.1	32.0	108.0	106.2	41.1	60.5	1.4
25	185.4	166.1	42.7	126.0	120.7	47.2	61.5	2.3

Dimensions shown are nominal. Allowances must be made for normal manufacturing tolerances.

## Agency Compliance

ASSE Listed (Std 1020)  
CAN/CSA Certified (B64.1.2)  
IAPMO® Listed

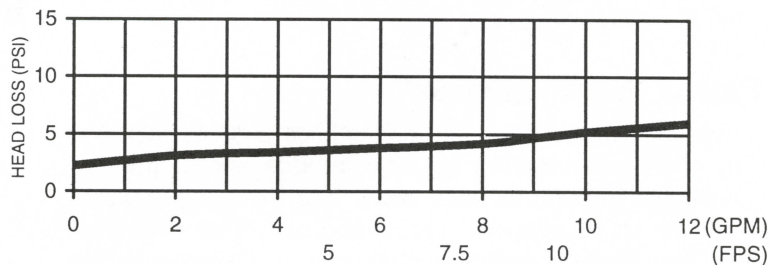
## Characteristics and Materials

Maximum working pressure	150 psi (1034 KPa)
Hydrostatic test pressure	300 psi (2069 KPa)
Temperature range	32°F to 140°F (0°C to 60°C)
Fluid	Water
End detail	Threaded ANSI B2.1
Main valve body	Bronze
Elastomers	Silicone

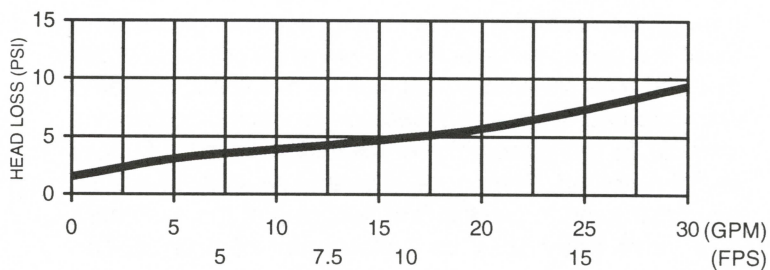
## Model 766 Flow Curves

Documented flow curve established by the Foundation for Cross-Connection Control and Hydraulic Research at the University of Southern California.

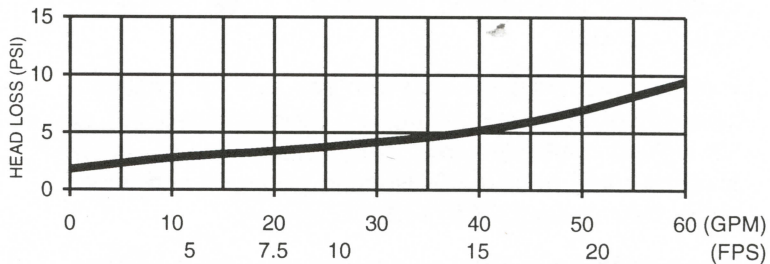
### 1/2"



### 3/4"



### 1"



FLOW RATE (GPM)  
VELOCITY (FPS)

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