# SPECIFICATION SHEET MODEL 765

FEBCO®
BACKFLOW PREVENTION

## *PRESSURE VACUUM BREAKER*

### Features

- Available in 1/2" through 2" sizes.
- 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 protect valve bodies from freeze damage.
- Optional union end ball valves for easy removal and ultimate freeze protection.

### Operation

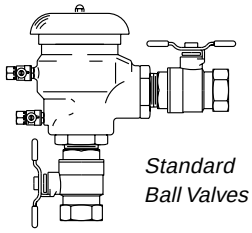
The Febco 765 PVB is designed to be installed to provide protection against backsiphonage of toxic or non-toxic liquids. It consists of a spring loaded check valve which closes tightly when the pressure in the assembly drops below 1 PSI or when zero flow occurs, plus, an air relief valve that opens to break a siphon when the pressure in the assembly drops to 1 PSI.

### Typical Specifications

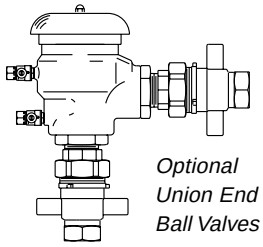
Pressure Vacuum Breaker assemblies shall be installed to withstand pressure for long periods and to prevent backflow of contaminated water into the potable water system in backsiphonage conditions. The Pressure Vacuum Breaker assembly shall consist of a single spring loaded check valve which closes tightly 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, and 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. The assembly shall meet the specifications of the USC* approval.

Pressure Vacuum Breaker assemblies shall be Febco Model 765 or prior approved equal.



*Standard Ball Valves*



*Optional Union End Ball Valves*

### Agency Compliance

Approved by the Foundation for Cross-Connection Control and Hydraulic Research at the University of Southern California.①

ASSE Listed (Std. 1020)

CAN/CSA Certified (B64.1.2)

IAPMO® Listed

① Valves must be supplied with resilient seated ball valve shut-off's and test cocks for USC's approval to be effective.*

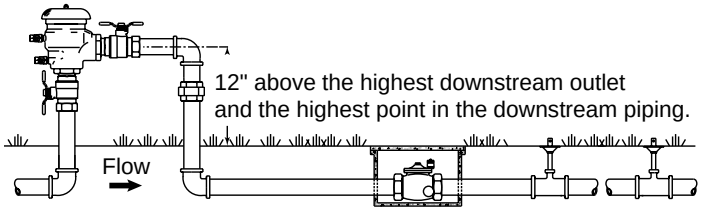
### Typical Applications

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 and outlet downstream of the assembly to preclude backpressure. 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 765” must be followed. Assemblies must not be installed where backpressure could occur.

The discharge pressure shall be maintained above 3.0 PSI on 1/2" through 1 1/4" sizes and 5.0 PSI on 1 1/2" and 2" sizes 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.

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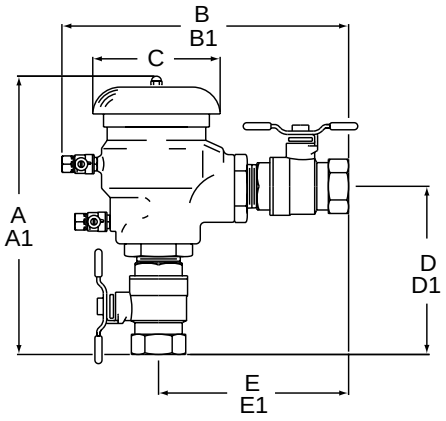



## Characteristics and Materials

| | |
|---|---|
| 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 ($^1/_2$" - 2"): | Threaded ANSI B2.1 |
| Main valve body: | Bronze |
| Elastomers: | Nitrile |

## Options

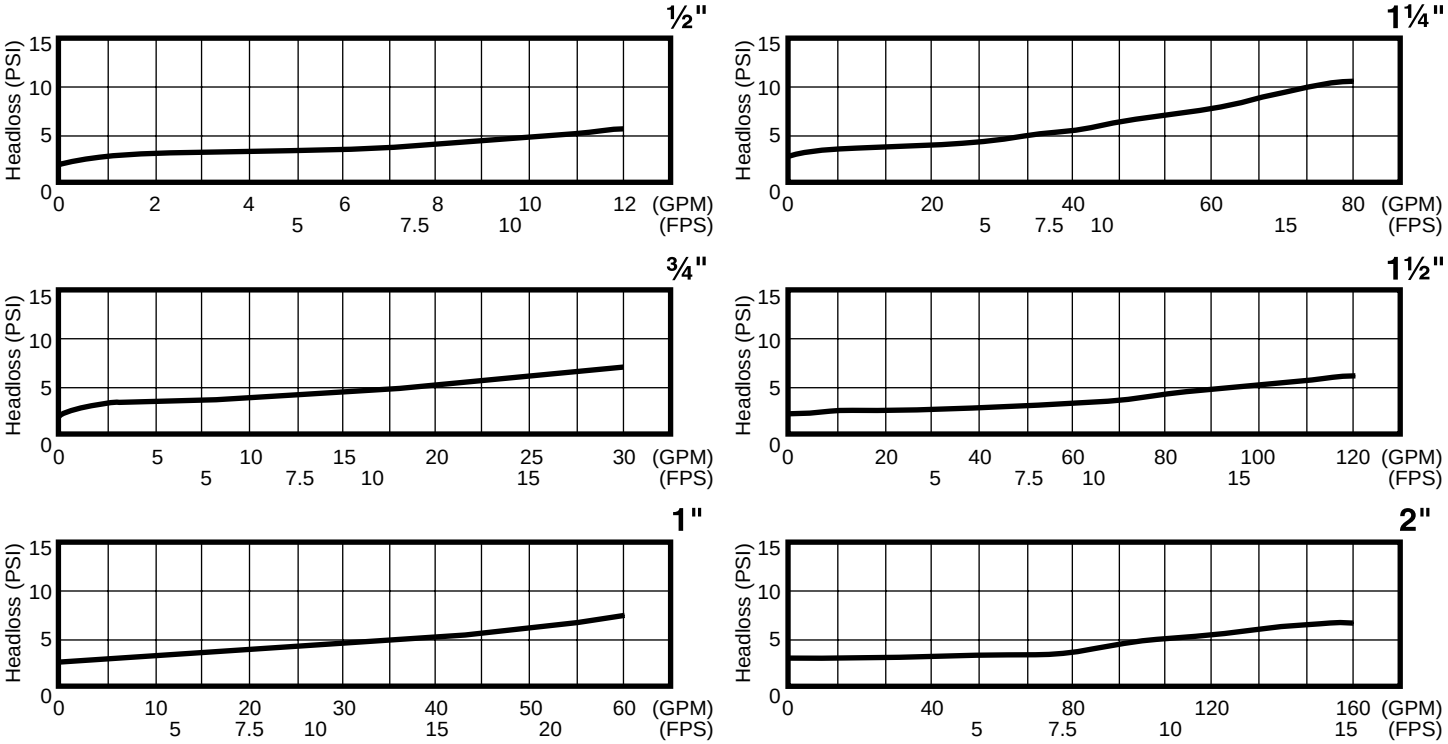
- ☐ Union End Ball Valves
- ☐ Bronze Bonnet (1" & $1^1/_4$")

| U.S. - Inches | A | A1 Union BV | B | B1 Union BV | C | D | D1 Union BV | E | E1 Union BV | lbs. |
|---|---|---|---|---|---|---|---|---|---|---|
| $^1/_2$ | $6^1/_4$ | 7 | $6^3/_4$ | $7^1/_2$ | $2^1/_2$ | $3^3/_4$ | $4^1/_2$ | $4^1/_4$ | 5 | 2.6 |
| $^3/_4$ | $6^1/_2$ | $7^3/_8$ | 7 | $7^7/_8$ | $2^1/_2$ | 4 | $4^7/_8$ | $4^1/_2$ | $5^3/_8$ | 2.9 |
| 1 | $8^3/_4$ | $9^5/_8$ | 9 | $9^{15}/_{16}$ | 4 | $5^1/_4$ | $6^3/_{16}$ | 6 | $6^{15}/_{16}$ | 5.9 |
| $1^1/_4$ | $9^1/_4$ | $10^1/_4$ | 10 | 11 | 4 | $6^1/_4$ | $7^1/_4$ | 7 | 8 | 7.0 |
| $1^1/_2$ | $11^3/_4$ | $12^7/_8$ | $11^1/_2$ | $12^5/_8$ | $6^1/_2$ | $7^1/_4$ | $8^3/_8$ | $7^3/_4$ | $8^7/_8$ | 14.8 |
| 2 | $12^1/_2$ | $13^3/_4$ | $12^1/_4$ | $13^1/_2$ | $6^1/_2$ | 8 | $9^1/_4$ | $8^1/_2$ | $9^3/_4$ | 16.5 |

| Metric - MM | A | A1 Union BV | B | B1 Union BV | C | D | D1 Union BV | E | E1 Union BV | kgs. |
|---|---|---|---|---|---|---|---|---|---|---|
| 12 | 158.8 | 177.8 | 171.5 | 196.9 | 63.5 | 95.3 | 114.3 | 108.0 | 127.0 | 1.2 |
| 20 | 165.1 | 187.3 | 177.8 | 200.0 | 63.5 | 101.6 | 123.8 | 114.3 | 136.5 | 1.3 |
| 25 | 222.3 | 244.5 | 228.6 | 252.4 | 101.6 | 133.4 | 157.2 | 152.4 | 176.2 | 2.7 |
| 30 | 235.0 | 260.4 | 254.0 | 279.4 | 101.6 | 158.8 | 184.2 | 177.8 | 203.2 | 3.2 |
| 40 | 298.5 | 327.0 | 292.1 | 320.7 | 165.1 | 184.2 | 212.7 | 196.9 | 225.4 | 6.7 |
| 50 | 317.5 | 349.3 | 311.2 | 342.9 | 165.1 | 203.2 | 235.0 | 215.9 | 247.7 | 7.5 |

Weights shown do not include union end ball valves and are approximate. Dimensions shown are nominal, allowances must be made for normal manufacturing tolerances.

## Model 765 Flow Curves

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