

## For Non-Health Hazard Applications

Job Name \_\_\_\_\_

Contractor \_\_\_\_\_

Job Location \_\_\_\_\_

Approval \_\_\_\_\_

Engineer \_\_\_\_\_

Contractor's P.O. No. \_\_\_\_\_

Approval \_\_\_\_\_

Representative \_\_\_\_\_

# LEAD FREE\*

## Model 9BD Backflow Preventer for Vending Machine Water Supply Lines

Sizes: 1/4" and 3/8" (6 and 10mm)

Model 9BD backflow preventer for vending machine water supply lines prevents backflow of carbon dioxide gas and carbonated water into the water supply system to vending machines, thus eliminating the hazardous reaction of carbon dioxide with copper tubing.

Its design features include a dual check valve to assure positive, dependable seating protection. For trouble-free longevity, it is also equipped with a ball check valve which is a third-check member, its main function being to prevent backpressure on each pump cycle from unnecessarily acting directly on the check members. Instant check valve response prevents unnecessary vent discharge during pump "off cycle".

Vent discharges CO<sub>2</sub> gas to atmosphere in the event of fouling or malfunction of check No. 2 thereby safeguarding the potable water system from CO<sub>2</sub> gas contamination. In line design minimizes pressure drop across the valve thereby assuring maximum pump performance.

### Features

- Available in Flare or NPTM end connections
- Stainless steel body and parts
- Instant check valve response
- Minimum pressure drop
- Triple check protection of the water supply

### Pressure - Temperature

Temperature Range: 33°F-140°F (0.5°C-60°C)

Maximum Working Pressure; 150psi (10.34 bar)

All stainless steel body and heavy duty rubber parts assure the longest and most dependable operating life. All rubber compounds comply with FDA food additive regulations.

### Standards

Designed to meet the requirements of New York City Health Code Section 81.47.

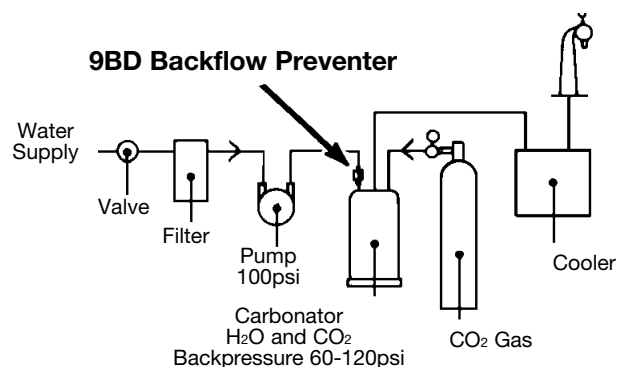
NSF Standard No. 25, Revised Items 4.35.2 and 4.35.3.

**\*The wetted surface of this product contacted by consumable water contains less than one quarter of one percent (0.25%) of lead by weight.**



9BD

### Typical Installation



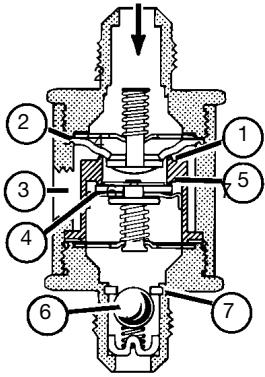
### Approvals

Approved by independent testing, completing over 2,000,000 successful pump cycles with positive backflow protection and trouble-free performance.

All rubber compounds comply with FDA food additive regulations.

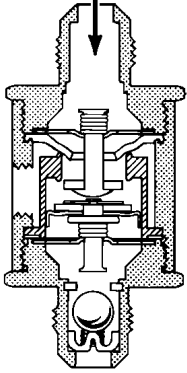
Watts product specifications in U.S. customary units and metric are approximate and are provided for reference only. For precise measurements, please contact Watts Technical Service. Watts reserves the right to change or modify product design, construction, specifications, or materials without prior notice and without incurring any obligation to make such changes and modifications on Watts products previously or subsequently sold.

## How it Operates



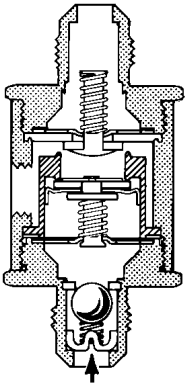
### Static Pressure-No Flow

Primary disc (1) seats against diaphragm (2) with diaphragm (2) sealing off the atmospheric port (3). Secondary disc (4) seals against downstream seat (5). Ball check (6) seals against ball check seat (7). This is the normal position taken by the device when there is no demand on downstream equipment.



### Valve Opened Flowing Under Pressure

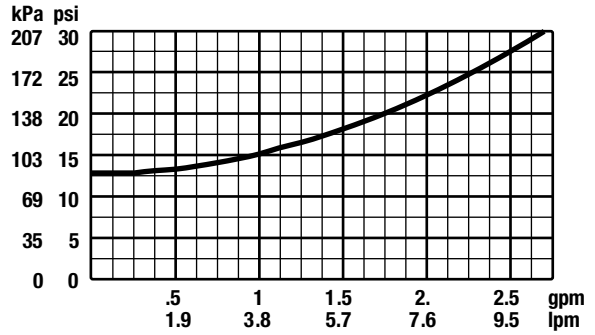
With flow through valve, primary disc opens away from diaphragm seal. Atmospheric port remains closed by deflection of diaphragm seal. Secondary disc opens away from downstream seat. Ball check opens away from ball check seat permitting flow of water through valve.



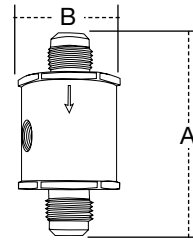
### Valve Closed by Back Pressure in System

With a backpressure condition created, ball check seats firmly against ball check seat. Secondary disc seals tightly against downstream seat. Primary disc seals tightly against diaphragm. Atmospheric port is now open permitting air to enter air break chamber. In the event of fouling of downstream check valve, leakage of CO<sub>2</sub> gas would be vented to atmosphere through the vent port thereby safeguarding the potable water system from CO<sub>2</sub> gas contamination.

## Capacity



## Dimensions - Weights



SIZE(DN)		DIMENSIONS				WEIGHT	
in.	mm	A		B		lbs.	kgs.
		in.	mm	in.	mm		
1/4	6	2 3/4	70	1 3/8	35	.38	.17
3/8	10	2 3/4	70	1 3/8	35	.38	.17

This valve should only be used in areas where spillage of water could not cause damage. Install a vent discharge line to the vent outlet of 9BD and vent to a safe place of disposal with adequate ventilation where CO<sub>2</sub> discharge is not a hazard.

# WATTS®

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