



3A CIP'able Vacuum Breaker

Unique 7000 Vacuum Breaker Valve

Concept

The Tri-Clover® Unique 7000 air operated vacuum breaker is used to eliminate vacuum on the downstream side of the pasteurizer in an HTST system.

Sharing the same actuator as the Unique 7000 small single seat valve, it is truly CIPable - it needs only one air connection for CIP control. In addition, the Unique 7000 Vacuum Breaker can be fitted with an IndiTop® or ThinkTop® position indication unit. This enables verification that the valve is properly functioning during process and CIP operations via indication feedback from the top unit

Working principle

The working principle is similar to that of a ball check valve. When pipelines are pressurized during process or CIP, the internal ball is forced upward against its seat, closing the vent port (see fig. 2a).

When pipeline pressure drops, the ball is drawn down, allowing air to enter the vent, thereby preventing vacuum in the system (see fig. 2b).

During CIP, a pneumatic actuator is used (pulsed) to force the ball off the upper seat, allowing cleaning of the seat and the internals of the vacuum breaker valve. The CIP fluid discharged during the actuator pulse is ushered to drain via the vent port (see fig. 2c).

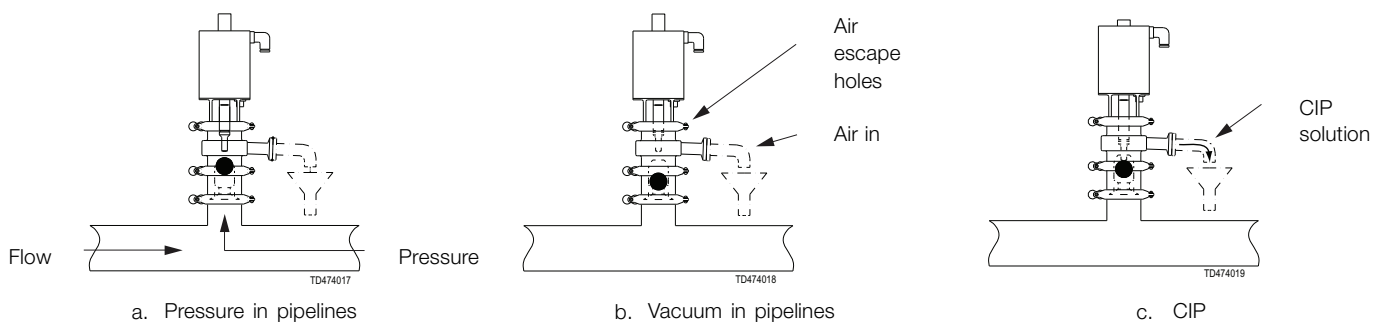


Fig. 2. Working Principle

TECHNICAL DATA

Pressure

Valve:

Maximum product pressure 145 PSI
Minimum product pressure Full vacuum.
Temperature range 14° F to 225° F

Actuator:

Maximum air pressure 101.5 PSI
Minimum air pressure 73 PSI

PHYSICAL DATA

Materials

Valve/Actuator:

Product wetted steel parts: AISI 316L
Product wetted seals FPM
Ball Polypropylene HD
Finish: ≤ 32 RA

Actuator:

Seals NBR
Finish Semibright

Options

Material Grades

- Seals of Nitrile (NBR) or (EPDM)

Ordering

Please state the following when ordering:

- Unique 7000 Vacuum Breaker
- Wetted elastomer preference
- Control Top

Connections

Compressed air:

Compressed Air: 1/4" poly tubing

Vent: 1/2" Tri-Clamp

Process/CIP: 1 1/2" Tri-Clamp

Dimensions (inches)

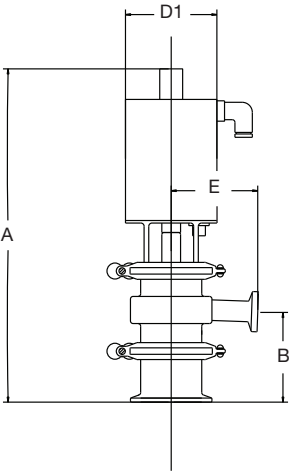


Fig. 3. Dimensions

Size	1.5-inch
A	8.18
B	2.20
D1	2.24
E	2.12
Weight (lbs.)	4.08

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