

# The First CIP'able Vacuum Breaker

GHVB Vacuum Breaker Valve

ESE00002EN 0209

## Application

The GHVB air operated vacuum breaker is used to eliminate vacuum on the down stream side of the pasteurizer in an HTST system. GHVB is truly CIPable - it needs only one air connection for CIP control. GHVB is authorized to carry the 3A symbol.

## Working Principle

The GHVB working principle is similar to a ball check valve principle. When pipelines are pressurized, the internal ball is forced upward, closing the port (see fig. 2a). When internal pressure drops, the ball is drawn down, allowing air to enter and relieve the vacuum (see fig. 2b). CIP pressure forces the ball upwards to close the port. Therefore an on/off air operated actuator is used (pulsing) to force the ball downwards, allowing the internal part to be CIP. CIP is discharged through the air intake (see fig. 2c).

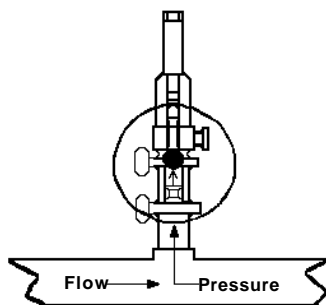
## Standard Design

The GHVB vacuum breaker consists of a body which is clamped together with a base. Both have clamp connections for pipeline connection and air intake/CIP discharge. An air cylinder is fitted on the body. The air cylinder is connected to a plunger which opens the vacuum breaker (ball) during CIP. The ball is seated inside the base.

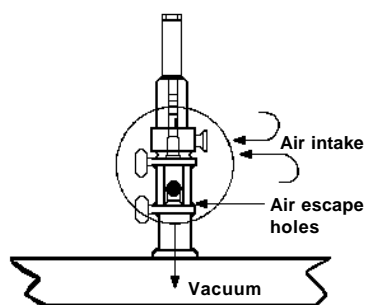


Fig. 1. GHVB Valve

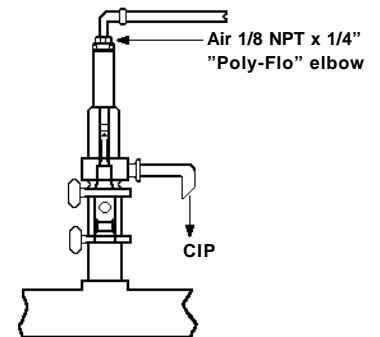
Fig. 2. Working Principle



a. Pressure in pipelines



b. Vacuum in pipelines



c. CIP

**Technical Data**

**Valve:**

Maximum product pressure ..... 145 PSI  
 Minimum product pressure ..... Full vacuum  
 Temperature range ..... 14° F to 194° F

**Actuator:**

Maximum air pressure ..... 100 PSI  
 Minimum air pressure ..... 40 PSI

**Materials**

**Valve:**

Product wetted steel parts ..... AISI 316L  
 Product wetted seals ..... EPDM  
 Ball ..... Polypropylene  
 Finish ..... < 32 RA

**Actuator:**

Body ..... AISI 304/Aluminium  
 Seals .....  
 Finish ..... Semibright

**Options**

**Material Grades**

- Seals of Nitrile (NBR) or Fluorinated rubber (FPM)

**Ordering**

Please state the following when ordering:

- GHVB
- Options

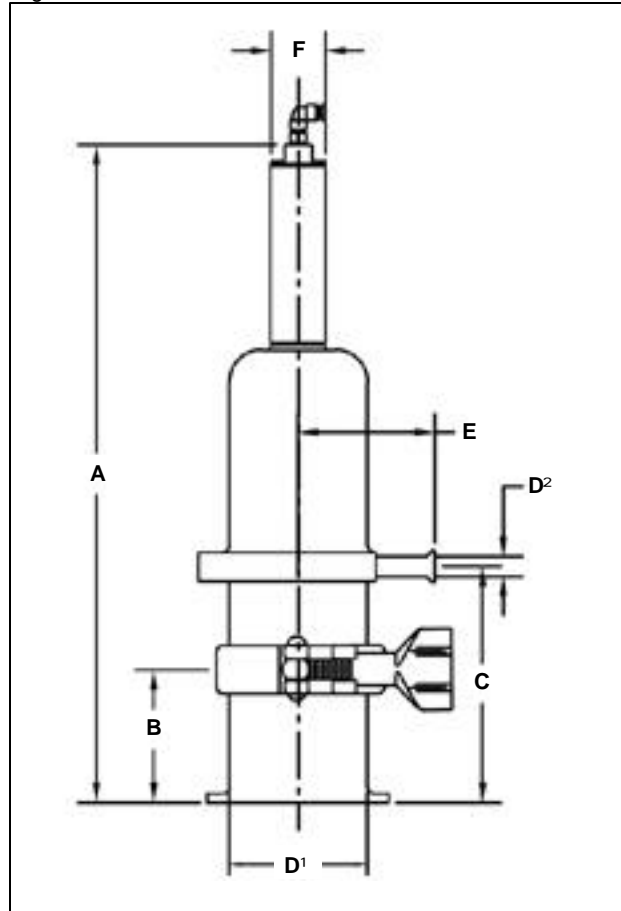
**Connections**

**Compressed air:**

1/8" NPT (used only to pulse valve during CIP)

**Dimensions (inches)**

Fig. 3. Dimensions



Size	1.5-inch
F	0.81
D1	1.50
E	1.95
D2	0.50
A	8.75
B	2.25
C	3.12
Weight (lbs.)	3.67