Rupture Pin® A BRAND of Taylor Valve Technology®

GET THE POWER OF THE PIN

MODEL CB
Angle Type Model

FROM THE CREATORS OF THE *Original* BUCKLING PIN VALVE

The Model CB holds a bubble-tight, closed position until pressure reaches an exact set point. At set point, the valve instantly opens to relieve pressure from a protected system.

- Wide variety of pressures ratings and settings.
- Orifices full bore or greater.
- Reliable settings.
- Utilizes proven design principle – Euler's Law.
- Provides bubble-tight seal in closed position.
- +/– 5% accuracy of set pressure. Accuracy usually held below +/– 3%.
- Complete stainless-steel body, piston, and trim.
- Reseats rapidly without opening the valve or line to atmosphere.
- Pin flag shows the pin code, valve serial number and pin set point in PSIG.
- No loose metal or plastic shards to enter the flow stream upon opening.
- One moving part.
- The pin cannot fatigue.
- Provides a reliable signal with the proximity sensor to monitor the stem movement and gives a remote indication that the valve has opened *(Option).*
- Spare pins can be stored at the valve *(Option).*
- Balanced piston design to negate the effects of back pressure *(Option).*

MODEL CB

ADVANTAGES

- No fugitive emissions, even on resetting
- Unaffected by pulsating pressures
- Unaffected by changing ambient temperatures on the pin
- Opens in milliseconds
- Operates to within 95% of set point
- Precise pin, obeying Euler's Law, acts as a pressure sensor and actuator
- Valve operates in constant back pressure, variable back pressure or vacuum

APPLICATIONS

Provides safety for a wide variety of pressure relief applications. The ideal substitute for rupture discs.

SPECIFICATIONS

VALVE POSITION
Pins are sized with the valve oriented as it will be in actual use; so, piston weight will not affect set point.

PRESSURE SET POINT RANGE
10 to 2,000 PSI

SIZES
1/2" to 2"

CONNECTIONS
Standard and custom connections available.

VALVE SEALS
Available for high and low temperatures, Viton standard.

STANDARD MATERIALS
Complete stainless-steel body, piston, and trim. Other exotic alloy materials available.

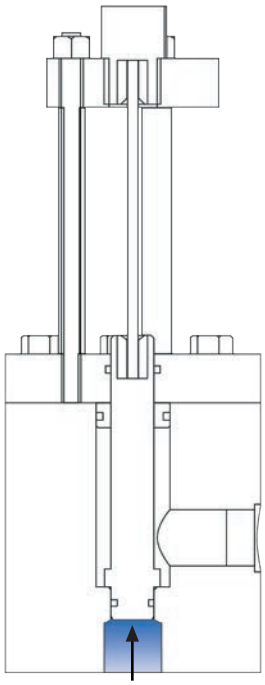
ACCURACY
+/– 5%

DOWNSTREAM PRESSURE BALANCED
Valve can be downstream balanced so that downstream pressure does not affect set point.

OPERATION

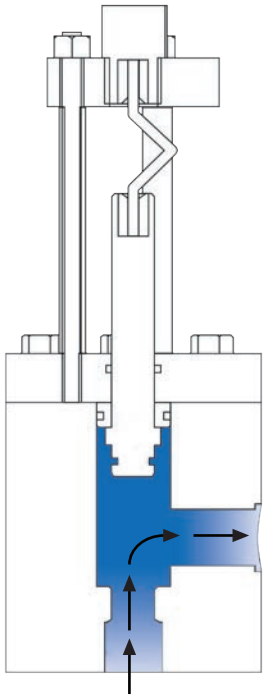
In the closed position, an elastomer seal contacts a machined, stainless-steel piston seat for a bubble-tight shut off. When the pin buckles, the piston moves off seat to allow full flow pressure relief.

Closed



(Straight Pin)
Pressure At Set Point

Open



(Buckled Pin)
Pressure Below Set Point

EULER'S LAW

$$\text{Axial Force on the Pin Causing the Pin to Buckle (Piston/Plunger Area x System Pressure)} \sim \frac{\text{Pin Diameter}^4 \times \text{Pin Material Modulus of Elasticity}}{\text{Pin Length}^2}$$

OPTIONS

PROXIMITY SENSOR
For remote open indication.

PIN CONTAINER
Pin storage at the valve.

STAINLESS-STEEL SAFETY CAGE
Protects your pin from accidental damage.

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WWW.TAYLORVALVE.COM