

Rupture Pin A BRAND of _____
Taylor Valve Technology

GET THE POWER OF THE PIN

MODEL D

Pressure Relief Valve

The **Model D** is an inline valve that 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.

FROM THE
 CREATORS
 OF THE
Original
 BUCKLING
 PIN
 VALVE



- Wide variety of pressures ratings and settings
- Orifices usually full bore or greater
- Utilizes proven design principle – Euler’s Law
- Environmentally safer option
- +/- 5% accuracy of set pressure
- Unaffected by changing ambient temperatures or pulsating pressures
- Stainless steel seat and piston – standard
- Reseats rapidly without opening the valve or line to atmosphere
- Pin flag shows the pin code, valve serial number and pin set point in PSI
- No loose metal or plastic shards to enter the flow stream upon opening
- One moving part
- The pin cannot fatigue
- Minimal down time to change the pin
- 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 D

ADVANTAGES

- Visual indication of opening
- Bleed only what is in the isolated valve.
- Unaffected by pulsating pressures.
- Unaffected by changing ambient temperatures at the pin.
- Opens in milliseconds.
- Operates to within 95% of set point.
- Pin cannot fatigue and buckle early.
- Precise pin, obeying Euler's Law, acts as a pressure sensor and actuator.
- Balanced design so valve senses only upstream pressure.

SPECIFICATIONS

PRESSURE SET POINT RANGE

5 PSI - 2,000 PSI.

VALVE SEALS

Available for high & low temperatures, viton standard.

STANDARD MATERIALS

Body mild steel, stainless steel trim is standard, other materials optional.

ACCURACY

+ / -5%.

OPTIONS

PROXIMITY DEVICE

For remote open indication.

PIN CONTAINER

Pin storage at the valve.

FLUSH PORT

Washing inlet seat.

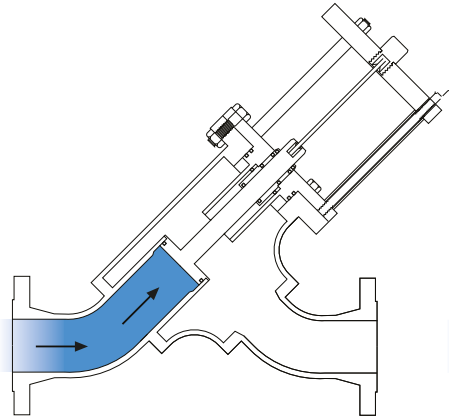
STAINLESS STEEL PIN GUARD

Protects your pin from accidental damage

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.

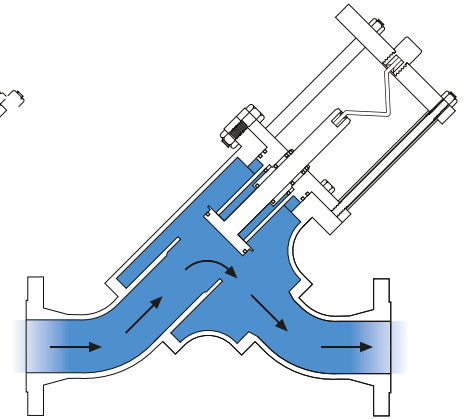
Closed



(Straight Pin)

Pressure below set point.

Open



(Buckled Pin)

Pressure at set point.



*Special design
for toxic fluids*

EULER'S LAW

$$\frac{\text{Axial Force on the Pin Causing the Pin to Buckle (Piston/Plunger Area x System Pressure)}}{\text{Pin Diameter}^4 \times \text{Pin Material Modulus of Elasticity}} \sim \frac{1}{\text{Pin Length}^2}$$

APPLICATIONS

Provides safety for a wide variety of pressure relief applications, including chemical process plants, pipelines, separators, refineries and paper mills. The ideal substitute for rupture disks.