



Rupture Pin®

A BRAND OF Taylor Valve Technology®



FROM THE
CREATORS
OF THE
Original
BUCKLING
PIN
VALVE

Precise.

Quality.

Reliable.

MODEL CM

Relief Valve



SINCE 1958

MODEL CM ADVANTAGES

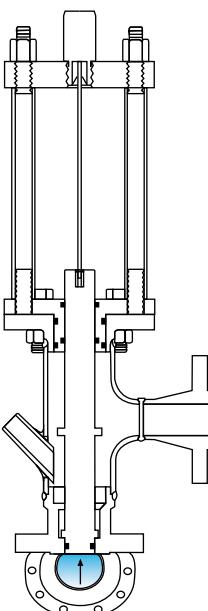
- Visual indication of opening.
- Bleed only what is in the isolated valve.
- Unaffected by pulsating pressures.
- Unaffected by changing ambient temperatures at the pin.
- Opens in milliseconds.
- Operates to within 95% of set point.
- Precise pin, obeying Euler's Law, acts as a pressure sensor and actuator.
- Balanced design so valve senses only upstream pressure.
- Flow moves past a flat piston.
- No voids for material to pack into.
- Angle port is provided to inject water to clear the seat of solids prior to reseating the piston.



OPERATION

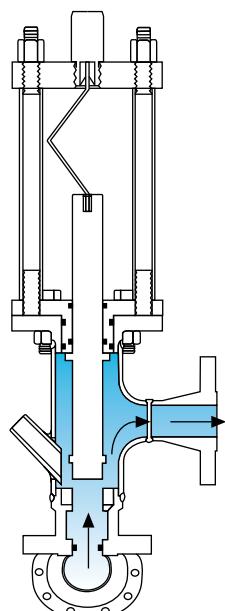
In the closed position, an elastomer seal contacts a machined, stainless-steel piston seat for a bubble-tight shut off. When the pin buckles, the piston moves off seat to allow full flow pressure relief.

Closed



(Straight Pin)
Pressure Below Set Point

Open



(Buckled Pin)
Pressure At Set Point

EULER'S LAW

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

OPTIONS

PROXIMITY SENSOR

For remote open indication.

PIN CONTAINER

Pin storage at the valve.

FLUSH PORT

Washing inlet seat.

STAINLESS-STEEL SAFETY CAGE

Protects your pin from accidental damage..

The **Model CM** is an angle body 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.

- Wide variety of pressure settings
- Utilizes proven design principle – Euler's Law
- Environmentally safer option
- $\pm 5\%$ above 40 PSI, ± 2 PSI at 40 PSI and below.
- Unaffected by changing ambient temperatures or pulsating pressures
- Stainless-steel seat and piston – standard
- Can be reseated rapidly without opening the valve or line to atmosphere
- Pin tag 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 piston 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 on most sizes (*Option*)

APPLICATIONS

For use on pulp applications, viscous fluids and steam jacketed flow systems.
The ideal substitution for rupture discs.

SPECIFICATIONS

PRESSURE SET POINT RANGE

5 PSI - 2,000 PSI.

VALVE SEALS

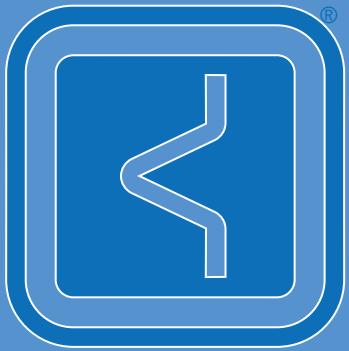
Available for high & low temperatures, viton standard.

STANDARD MATERIALS

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

ACCURACY

$\pm 5\%$ of set point



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Reliable.

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