

TRUSTED  
**SINCE 1958**  
WORLDWIDE

FROM THE  
CREATORS  
OF THE  
*Original*  
BUCKLING  
PIN  
VALVE

Precise.

Quality.

Reliable.



## MODEL CM ADVANTAGES

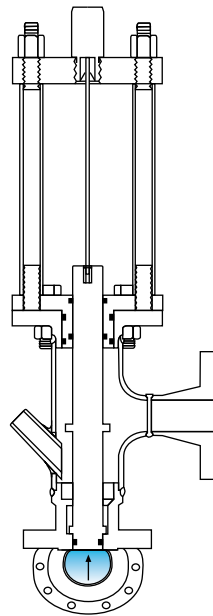
- Visual indication of opening.
- Bleed only what is in the isolated valve.
- Unaffected by pulsating pressures.
- Unaffected by changing ambient temperatures at the pin.
- Opens in milliseconds.
- Operates to within 95% of set point.
- Precise pin, obeying Euler's Law, acts as a pressure sensor and 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

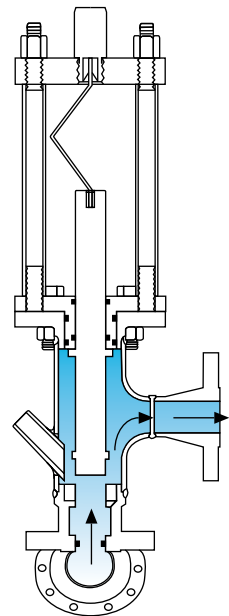
In the closed position, an elastomer seal contacts a machined, stainless-steel piston seat for a bubble-tight shut off. When the pin buckles, the piston moves off seat to allow full flow pressure relief.

### Closed



(Straight Pin)  
Pressure Below Set Point

### Open



(Buckled Pin)  
Pressure At Set Point

## EULER'S LAW

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

## 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,  $\pm 2$  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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