

## CRV® Flow Conditioning Applications

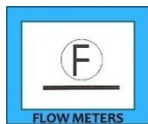
### Application



- Pump cavitation, flow separation, vibration and noise
- Frequent seal bearing or impeller replacement
- Non-uniform suction flow creating reduced flow
- Lack of space for proper pump installation



- Interstage hunting from non-uniform flow
- Inlet flow distortion causing less than factory rated flow, head and efficiency



- Inaccurate flow measurements
- Long straight pipe meter runs required
- Lack of space for proper installation



- Frequent elbow erosion due to particulate or two-phase flow
- Unsafe elbow erosion conditions
- Unscheduled maintenance shutdowns



- Check valve chatter with close coupled upstream elbows
- Disc pin wear and breakage
- Poor sealing due to pin wear



- Travelling pressure wave reflecting back and forth in piping system
- Pipe and elbow breakage

### Benefit

- Reduced maintenance intervals & less downtime
- Reduced cavitation, vibration & noise
- Improved net positive suction head (NPSH)
- Higher reliability with less energy consumption
- Increased pump efficiency and head

- Operate closer to factory rated flow, head & efficiency
- Reduced suction piping pressure drop and reduced energy costs

- Accurate flow measurements
- More compact pipe layout
- Reduced piping costs

- Extended life of elbows
- Safer and better operating and maintenance conditions
- Safer work environment
- Less down-time

- Eliminate elbow induced flow turbulence
- Extend pin life
- Improve sealing life

- Minimize pipe damage using CRV® as a passive damper for pressure waves
- Extended life of elbows and pipes