



# FlowGuard® Pulsation Dampeners

Pulsation Dampeners (aka dampers) are hydro-pneumatic devices designed to remove pulsations, vibrations and noise caused by positive displacement pumps in fluid systems.

Using pulsation dampeners on positive displacement pumped systems will result in improved instrument readings, increased pump life, lower maintenance costs, and lower running costs. They eliminating the possibility of pipe fracture caused by vibration and safeguard personnel from the risk of leaks.

## Principles of Operation

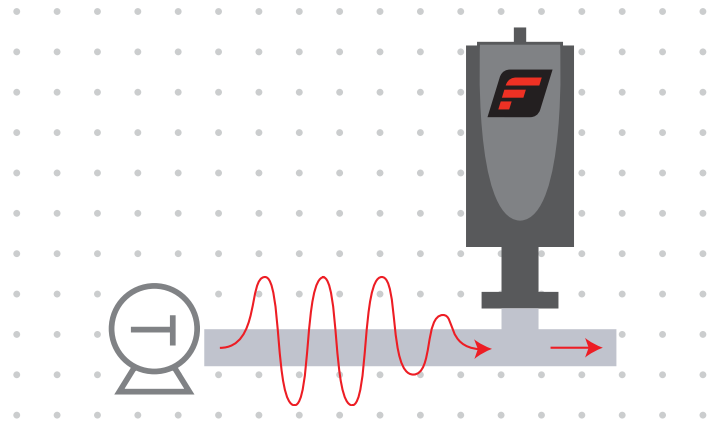
FlowGuard pulsation dampeners operate by employing a small volume of gas, usually nitrogen, contained within a flexible membrane fitted inside a non-corrosive shell. Each time a pulse comes from the pump, part of the pulse goes into the damper and the gas is compressed slightly. As the flow decreases the pulse stored in the damper will be pushed back into the line. The result is a smooth flow which will keep pressure fluctuations within the required limits (level of damping).

## Designed Efficiency

Superior, uncomplicated, and efficient designs ensure levels of performance unmatched by traditional adapted hydraulic accumulators. The basic, yet rugged, construction makes them economically priced and easy to maintain.

## Exceptionally Durable

Our standard housings are made of non-corrosive 316 stainless steel, polypropylene, or of special alloys like titanium, Hastelloy®, Monel™, etc. The membrane is available in 10 different types of rubber or PTFE (Teflon®) bellows or diaphragm.

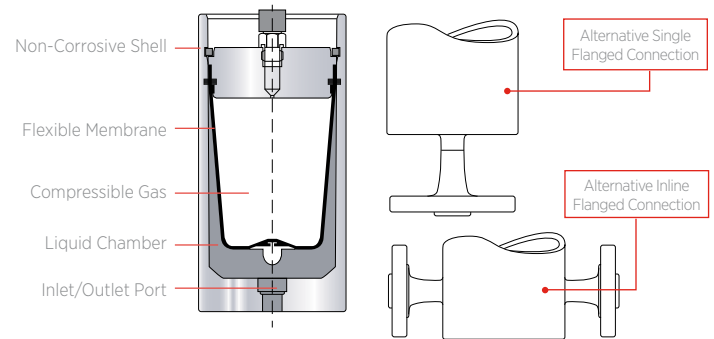


## Broad Range to Fit Your Needs

CoorsTek wide range of FlowGuard pulsation dampeners fulfill most pressure requirements (from 150psi (10 bar) to 15,000psi (1,000 bar)) and may be custom made to meet any specification or a particular duty requirement.

## Certified High Quality

Designed and manufactured to the highest standards, FlowGuard pulsation dampeners conform to internationally recognized pressure vessel codes and may be supplied with full material certification (ASME Coded) if required.



# Benefits & Features

## Features of FlowGuard Pulsation Dampeners

- Unrestricted inlet port (no poppet valve) for improved damping efficiency
- Welded flange connections as well as BSP & NPT threaded
- Very simple gas charging system
- One-piece, moulded membranes (no glued joints) on all standard sizes
- In-line (2 port) available as an option with a choice of port orientation
- Easy-to-service membrane can be changed without removing damper from the line
- Fully coded and approved welding with 100% x-ray, if required

## Benefits of FlowGuard Pulsation Dampeners

- Remove pressure fluctuations and surges
- Stop vibration & shaking of pipes
- Ensure a continuous, steady flow
- Reduce noise in problem systems
- Reduce overload on pump motors and gearboxes where there are long pipe runs
- Prevent pump overdelivery
- Prevent cavitation caused by poor suction conditions, long suction lines, etc.

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