SENTRY™

PULSATION DAMPENERS

Pulsation Dampeners
Surge Suppressors
Inlet Stabilizers

Benefits

- Protects pumps, piping, valves, fittings, and components from damaging vibrations and fatigue.
- Prevents destructive pressure surges caused by rapid pump startup and shutdown.
- Prevents hydraulic shock from quick closing valves or equipment shutdown.
- Improves the accuracy and longevity of flow meters, pressure gauges and other inline instrumentation.
- Ensures a smooth and consistent fluid flow in metering pump systems, chemical injection processes, and dosing applications.
- Prevents product agitation, foaming, splashing and contamination.
- Ensures uniform and continuous application in spraying and coating processes.
- Improves the transfer process when pumping viscous or abrasive fluids.

Features

- Models in stock for pumps with discharge sizes from 1/8” (3.18mm) to 6” (152.4mm).
- Maximum pressure ratings up to 15,000 psi (1034.2 bar).
- Temperature ranges from -60°F (- 51°C) to 400°F (204°C); metal bellows -200°F (-129°C) to 800°F (426°C).
- Simple and reliable design for quick installation and easy inline maintenance.
- Available in a full range of plastic and metal materials with elastomer bladders, PTFE or stainless steel bellows.
- Each unit factory pressure tested to assure proper function and leak-free operation.
- ATEX and CRN certification on metal models. NSF/ANSI certification on select plastic models. Additional certifications and testing on request.

ABOUT Pulsation Dampeners

Positive displacement pumps create destructive pulsation and hydraulic shock due to the reciprocating nature of their stroking action, potentially damaging piping and system components. SENTRY Pulsation Dampeners and Surge Suppressors remove virtually all system shock, enhancing the performance and reliability of fluid flow in municipal, industrial, sanitary and chemical transfer applications. SENTRY Inlet Stabilizers minimize pressure fluctuations and acceleration head losses by preventing fluid column separation at the pump’s inlet.

Remove virtually all system shock to enhance system performance, reliability and safety. Prevent water hammer, minimize pulsation, eliminate vibration, and ensure a consistent laminar fluid flow.

Available in a full range of chemically resistant materials for even the most corrosive applications.

All SENTRY Pulsation Dampeners use pressure bodies made in the USA to ensure quality. Prior to shipment, each and every dampener is factory pressure tested to assure proper function and leak-free operation.

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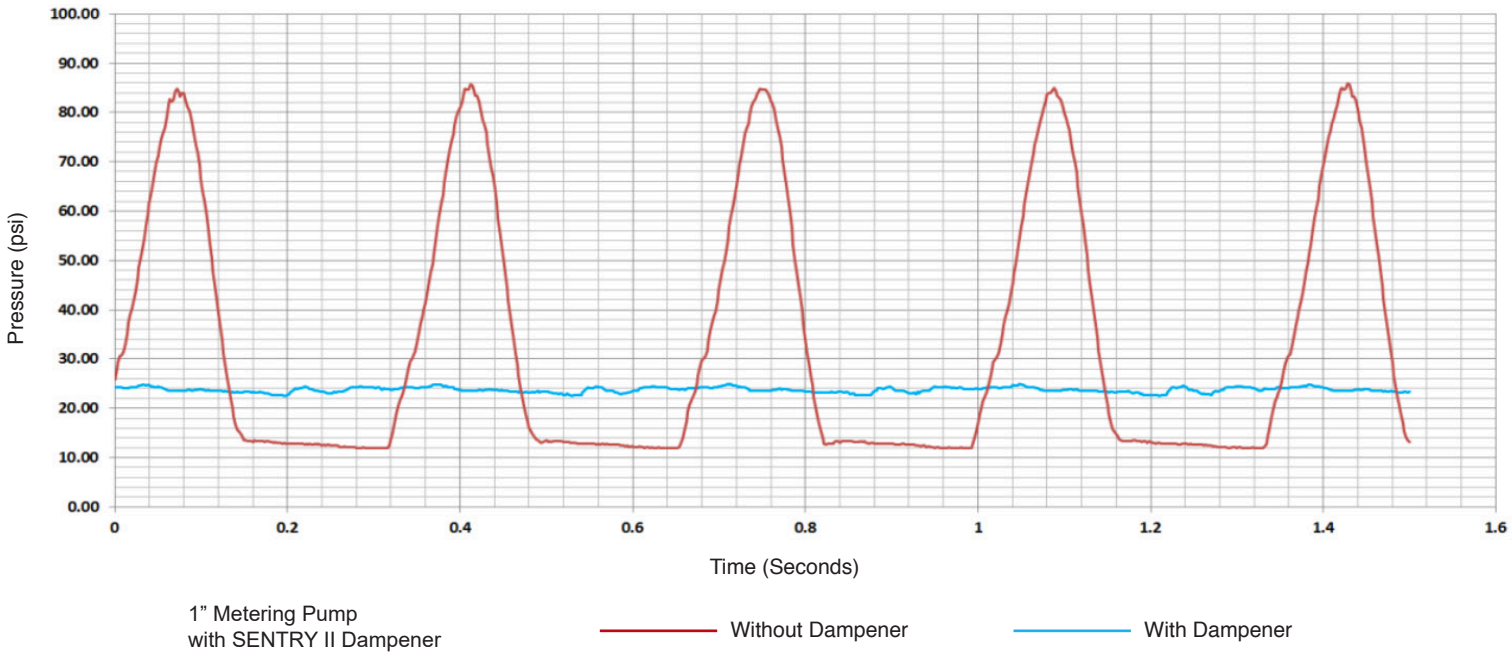
Pulsation and Surge Control

The start and stop action of positive displacement pumps rapidly accelerates and decelerates fluid in motion resulting in pulsations observed as pressure spikes. Pulsation dampeners absorb the energy of these pressure spikes by accumulating and then releasing process fluid when the pump is on its suction stroke. By keeping the fluid in motion, dampeners eliminate vibration and the pulsing, inconsistent flow caused by pulsation.

Water hammer (or hydraulic shock) occurs when fluid in motion is suddenly started, stopped or forced to change direction. Quick closing valves, rapid pump startup/shutdown, even changes in the pipe profile, can cause an abrupt change in fluid velocity producing violent and sometimes catastrophic water hammer. Surge suppressors act as shock absorbers by accumulating and releasing process fluid as needed to slow the rate of fluid velocity change to a level low enough to prevent water hammer.

Performance Chart: SENTRY™ Dampener



1" Metering Pump
with SENTRY II Dampener

Without Dampener

With Dampener

SENTRY™ Air Control Options

Adjustable Air Control

With a compressed air line permanently attached, the regulator allows for an easy, convenient method to adjust dampener pressure with system pressure changes.

Automatic Air Control

The dampener automatically self-adjusts as system pressure increases or decreases, and resets to be ready to start dampening again when the system restarts.

Chargeable Air Control

No permanent source of compressed gas is required. With the gas fill valve the dampener can be manually bled or charged to the required pressure setting.

Inlet Stabilizer J Model Air Control

The inlet stabilizer J Model air control allows for pressure or vacuum settings and is adjustable for suction lift or positive inlet conditions.

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