



# YAMADA AD SERIES

## PULSATION DAMPENERS

The pulsation dampener is an accessory for Yamada air-operated double diaphragm pumps, designed to minimize pulsations and maintain stable discharge flow and pressure during operation.

Aluminum 

PPG

Cast Iron 

PVDF 

Stainless steel 

PTFE

### Damper Compatibility

Each pulsation dampener series fits specific pump types. See the table below for the correct match.

AD-10	NDP-5, DP-10 & NDP-15
AD-25	NDP-20/P20, NDP-25/P25 & NDP-32
AD-40	NDP-40
*AD-50	NDP-50/P50 & NDP-500, *NDP-80

\* When mounting the AD-50 on an NDP-80, please take the difference in nominal diameter into account. Contact us for more information.

### Features

- 3/8", 1", 1-1/2" & 2" port sizes
- Stainless Steel, Aluminum, Cast Iron, PTFE, Polypropylene & Kynar® (PVDF) housings
- Santoprene®, Hytrel®, Buna-N, EPDM, Neoprene, Viton® & PTFE Diaphragms
- Flow through design keeps solids in suspension
- Totally automatic air motor-self relieves if discharge head reduces
- Low air consumption
- Bolted construction
- PTFE coated air chamber optional
- Same diaphragms inside dampener and pump

### Applications

- **Metering / Injection / Dosing:** Smoothing out discharge flow, increasing accuracy.
- **Filter Press / Inline Filters:** Increase filter efficiency by providing smooth flow
- **Spraying:** Smooth and consistent spray pattern is easily accomplished
- **Filling:** Eliminates inconsistent filling and splashing. Protects environments against splashing pollution. Protects workers.
- **Transfer:** Eliminate harmful water hammer, which damages piping and valves

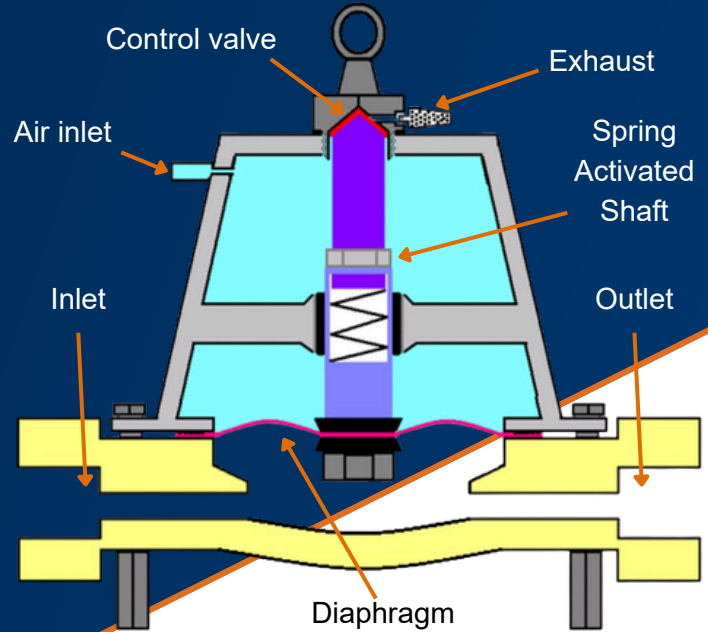




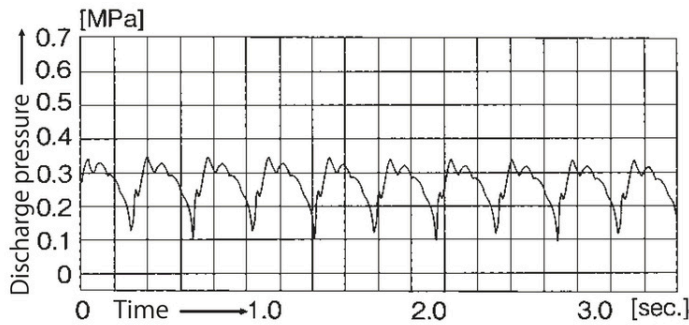
# YAMADA AD SERIES PULSATION DAMPENERS

## Principles of Operation

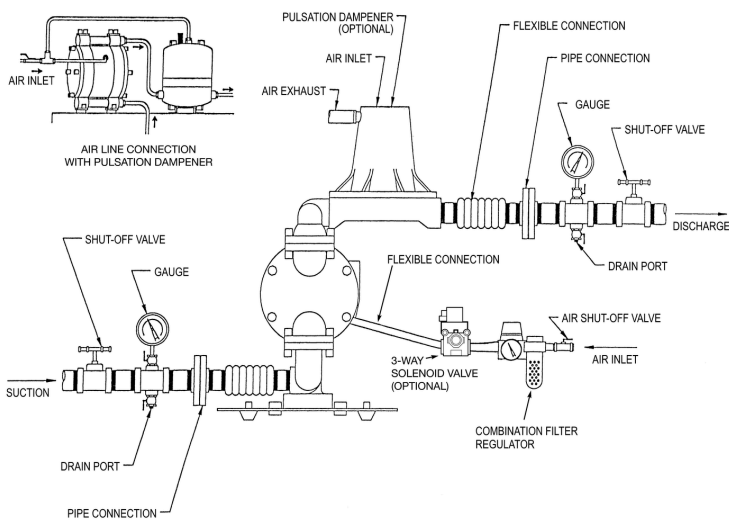
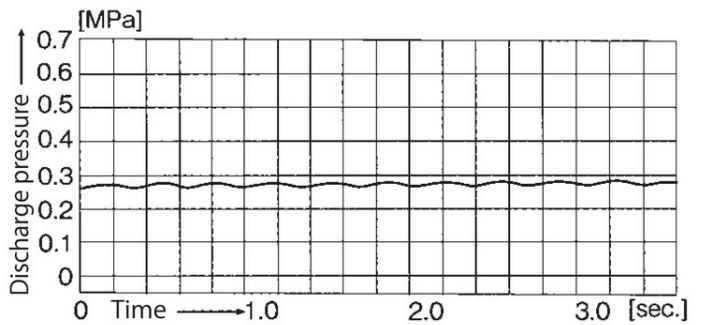
Compressed air is introduced to the top section of the pulsation dampener at the same operating pressure of the pump. When the AODD pump produces a pulse, fluid will enter the in-line dampener. As fluid enters the dampener, the trapped air behind the diaphragm is compressed. The fluid remains in the dampener until the system pressure returns to normal or when the pump begins another cycle. The fluid is then pushed back into the system piping as the trapped gas expands. The dampener does not restrict fluid flow, nor increase its pressure, but fills the voids and pressure fluctuations created by an AODD pump.



## Without Pulsation Dampeners



## With Pulsation Dampeners



Mount the pulsation dampener within 1 meter of the pump. This ensures that the dampener is exposed to the maximum operating pressure, increasing its efficiency and effectiveness.

Before operation, pre-adjustments are required. In particular, the supply air pressure must be properly set, as adjusting the air pressure directly influences the effectiveness of the dampener.

The dampener will consume air during operation, depending on the condition and intensity of the pulsation. For optimal performance, it is recommended that the system operates with at least 0.1 MPa of backpressure.

If the pulsation dampener is used in a low head application, a control valve may need to be installed downstream of the dampener to restrict flow and increase resistance.

