



Pulsation Control Products



High Pressure Pulsation Dampeners

Positive Displacement (PD) pumps create pulsation and hydraulic shock due to the reciprocating nature of their stroking action, potentially damaging the entire pumping system. Pulsation Dampeners remove

hydraulic shock and reduce the pressure and flow fluctuations. This enhances the all-around performance and reliability of fluid handling equipment in industrial, chemical transfer, and precision metering applications.

Increase productivity, safety, reliability and efficiency.

Decrease maintenance and operating costs.

The Fluid Energy Controls Pulsation Dampeners are specially designed for use with high pressure reciprocating piston and plunger pump systems. The nitrogen gas pre-charged bladder inside the Pulse-Stop dampens the pressure pulsations created by the reciprocating action of the pumps.

The dampeners offer the following benefits:

- Increase pump efficiency
- Reduction in pump downtime
- Reduction in noise and vibration
- Reduction in costly damage to the system components

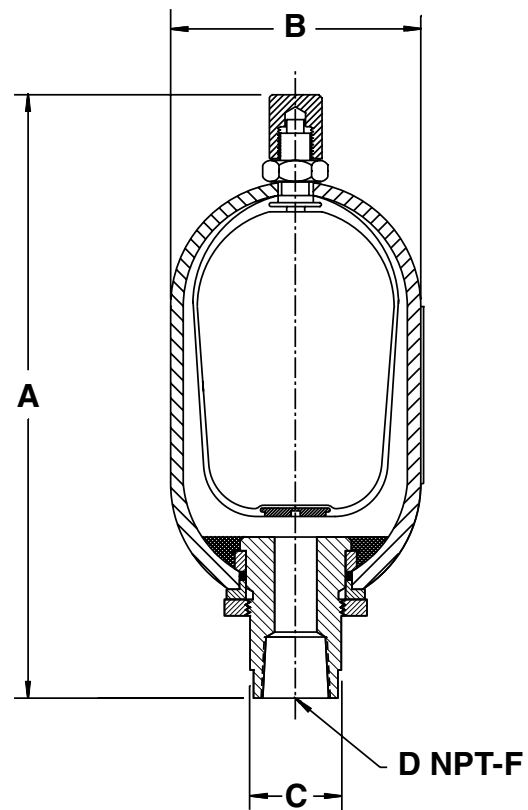
A properly selected pulsation dampener installed at the discharge side of the pump can both reduce the dampening pulsations and enhance the pump's efficiency and service life.

The Pulsation Dampeners are constructed of carbon steel and internally coated to resist corrosion. The port assembly is of stainless steel 300 series construction.

- Maximum operating pressure: 3000psig
- Replaceable bladder — can be changed in a few minutes
- Many bladder compounds available

Industries Served:

- Chemical Process
- Pulp, Paper and Textile
- Gas, Oil, and Petrochemical
- Biotech/Pharmaceutical
- Paint and Coating
- Food and Beverage
- Consumer Products
- Water Treatment



Nominal Size	"A" in.	"B" in.	"C" in.	D Port	Weight lb.
1 quart	11.73	3.46	1.62	1" NPTF	10.0
1 gallon	17.0	6.81	2.38	1¼" NPTF	34.0
2½ gallon	21.9	9.13	3.0	2" NPTF	95.0
Part Numbers					
		1 quart	1 gallon	2½ gallon	
Pulsation Dampener		7254000	7255000	7256000	
Repair Kit		5250017	5250011	5250031	

High Pressure Pulsation Dampeners

Fluid Energy Controls' pulsation dampeners are designed for oilfield application to minimize pressure pulses generated by positive displacement pumps. The dampeners are built to withstand high pressure as they smooth out the harmful pressure pulses originating from the pump. They are especially suitable for water and petrochemical applications.

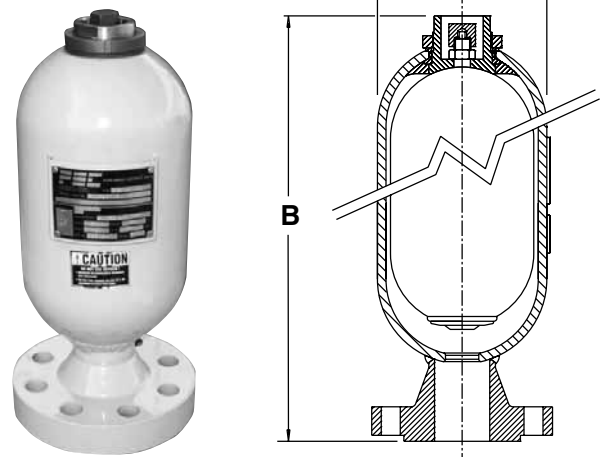
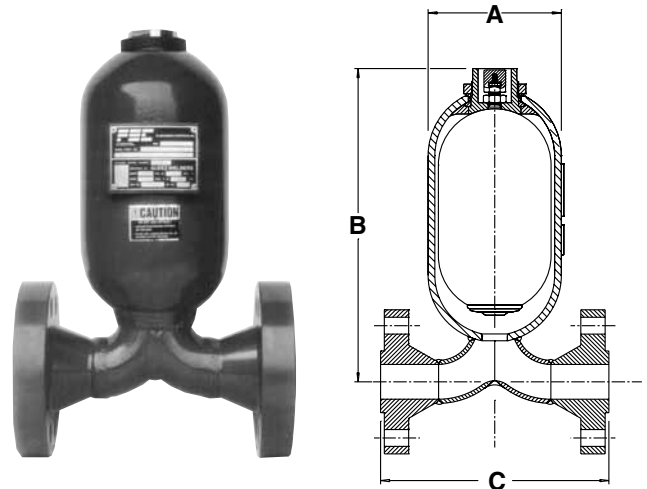
Features:

- **Flexible bladder design** effectively reduces pump pulsations, vibrations and noises
- **No poppet and spring** to restrict flow of viscous process liquids.
- **Top repairable design** for ease of maintenance
- **Designed and stamped** per ASME Code Section VIII, Div. I, European CE, Canadian CRN, Brazilian NR-13, Chinese SELO, and Malaysian DOSH certifications also available
- **Buna-N bladder with integral anti-extrusion button** for long life. Viton and other compounds available
- **All wetted parts are coated carbon steel or stainless steel**
- **Prolongs service life of pumps, valves, instruments, and pipe joints**

Flow-Through Design						
Size	Fluid Port Configuration	Part No.	Appr. Wt. lb.	"A" in.	"B" in.	"C" in.
1 qt.	1/2" - 1500# RFWN ANSI	7678000	17	4.5	8.5	7.0
1 gal.	3/4" - 1500# RFWN ANSI	7687000	70	6.63	11.5	9.0
1 gal.	1" - 1500# RFWN ANSI	7688000	75	6.63	11.5	9.5
2.5 gal.	2" - 1500# RFWN ANSI	7279000	155	9	21.0	14.25
2.5 gal.	2.5" - 1500# RFWN ANSI	7418000	165	9	21.0	15.25
2.5 gal.	3" - 1500# RFWN ANSI	7389000	190	9	21.0	16.25
5 gal.	2" - 1500# RFWN ANSI	7830000	195	9	33.0	14.25
5 gal.	2.5" - 1500# RFWN ANSI	7831000	205	9	33.0	15.25
5 gal.	3" - 1500# RFWN ANSI	7832000	235	9	33.0	16.25

Appendage					
Size	Fluid Port Configuration	Part No.	Appr. Wt. lb.	"A" in.	"B" in.
1 qt.	1/2" - 1500# RFWN ANSI	7696000	12	4.5	9.0
1 gal.	3/4" - 1500# RFWN ANSI	7672000	58	6.63	15.25
1 gal.	1" - 1500# RFWN ANSI	7671000	62	6.63	15.5
2.5 gal.	2" - 1500# RFWN ANSI	7833000	105	9	21.0
2.5 gal.	2.5" - 1500# RFWN ANSI	7611000	115	9	21.0
2.5 gal.	3" - 1500# RFWN ANSI	7834000	125	9	21.0
5 gal.	2" - 1500# RFWN ANSI	7835000	145	9	33.0
5 gal.	2.5" - 1500# RFWN ANSI	7836000	155	9	33.0
5 gal.	3" - 1500# RFWN ANSI	7837000	165	9	33.0

Bladder Repair Kits — Flow-Through and Appendage Design	
Size	Repair Kit No.
1 quart	5250017
1 gallon	5250011
2.5 gallon	5250015
5 gallon	5250083



Stainless Steel Pulsation Dampeners

Fluid Energy Controls 316 Stainless Steel Pulsation Dampener is specifically designed to satisfy the needs of petrochemical, reverse osmosis and water processing industries. It can effectively dampen the damaging pulsations caused by the reciprocating pumps. This reduces the possibility of costly damage to pipelines, instrumentation, loosened pipe fittings, leakage and downtime.

Features:

- Significantly reduces pump pulsations
- Reduces pump vibration and noise
- Increases pump service life; reduces wear and fatigue on pump's internal parts
- Repairable in the field
- All wetted parts are of 316 series stainless steel for protection against corrosion

Specifications:

- **Volume** — 60 cubic inches
- **Maximum working pressure** — 1,500 PSI
- **Operating temperature range** — -20°F to +185°F
- **Diameter** — 4.5 inches
- **Length** — 11 inches
- **Port** — 1" NPT (female)
- **Weight** — 10 lbs.

Installation, operation and maintenance are simple...

Installation — Install the dampener as close as possible to the discharge port of the pump.

Operation

- Precharge dampener with dry Nitrogen to approximately 70% of the system operating pressure.
- Check the precharge pressure periodically.

Note: All dimensions and weights are for general information only. Since products are in a continual state of refinement, please verify all critical dimensions with Fluid Energy Controls, Inc. Other materials of construction, pressure and connection are available upon request.

Warranty: Fluid Energy Controls, Inc. guarantees its products for materials and workmanship for one full year from the date of purchase, but because we cannot anticipate or control the many different conditions under which this information and our products may be used, we do not guarantee the applicability or suitability



Ordering Information

Bladder Compound	Part Numbers	
	Pulsation Dampener	Repair Kit
Viton	7217000	5250016
Buna-N	7218000	5250017
EPR	7219000	5250018

Pre-Charge Monitor Schedule

The Accumulators, Surge Suppressors and Pulsation dampeners shipped from the factory of Fluid Energy Controls are only pre-charged to 20 psi with dry Nitrogen gas. This pre-charge protects the bladders from getting damaged during shipping. After installation of the unit, the bladder inside the unit needs to be properly pre-charged with dry Nitrogen gas to 70-80% of the working pressure of the pipeline. The pre-charging is accomplished before the fluid starts pumping in the pipeline.

For newly installed units, the pre-charge should be monitored every two weeks. There should be no fluid pumping through the pipeline during this process. If the pre-charge has dropped, then more Nitrogen gas should be pumped into the bladder to raise the pre-charge in the bladder to the recommended pressure. When there is no loss of pre-charge noticed, the pre-charge should be monitored every four weeks.

Caution: Do not use Oxygen or air to pre-charge the bladder. Use only Nitrogen for pre-charging.

of our products in any given situation. Users of our products should make their own tests to determine the suitability of each product for their particular purpose. The products discussed are sold with a limited warranty and buyer assumes all responsibility for loss or damage arising from the handling and use of our products whether done in accordance with directions or not. Also, statements concerning the possible use of our products are not intended as recommendations to use our products.