Pulsation Dampeners Stainless Steel

Design Features and Benefits

1 Shell
Manufactured from high grade 316 Stainless Steel, other materials available.

- Nominal capacities 0.1 litre to 5 litres.
- Working pressures of up to 200 bar, higher pressures available on request.
- Wide range of separator materials available

2 Label
Vessel information is stamped directly on shell. Stainless Steel nameplates are available at an extra cost.

3 Material Certification
Material certifications are available to 3.1
NACE compliance is available on request.

4 Finish
Shot blasted Not painted as standard. Special paints available.

5 Fluid Port
A large variation of threaded or flanged options are available. For connection options

6 Safety
All gas-loaded pulsation dampeners are pressurized vessels and it is recommended that safety consideration be given to the application in which they are used. A relief valve should always be fitted to the hydraulic system See Installation and Servicing data sheet for information regarding installation of pulsation dampeners.

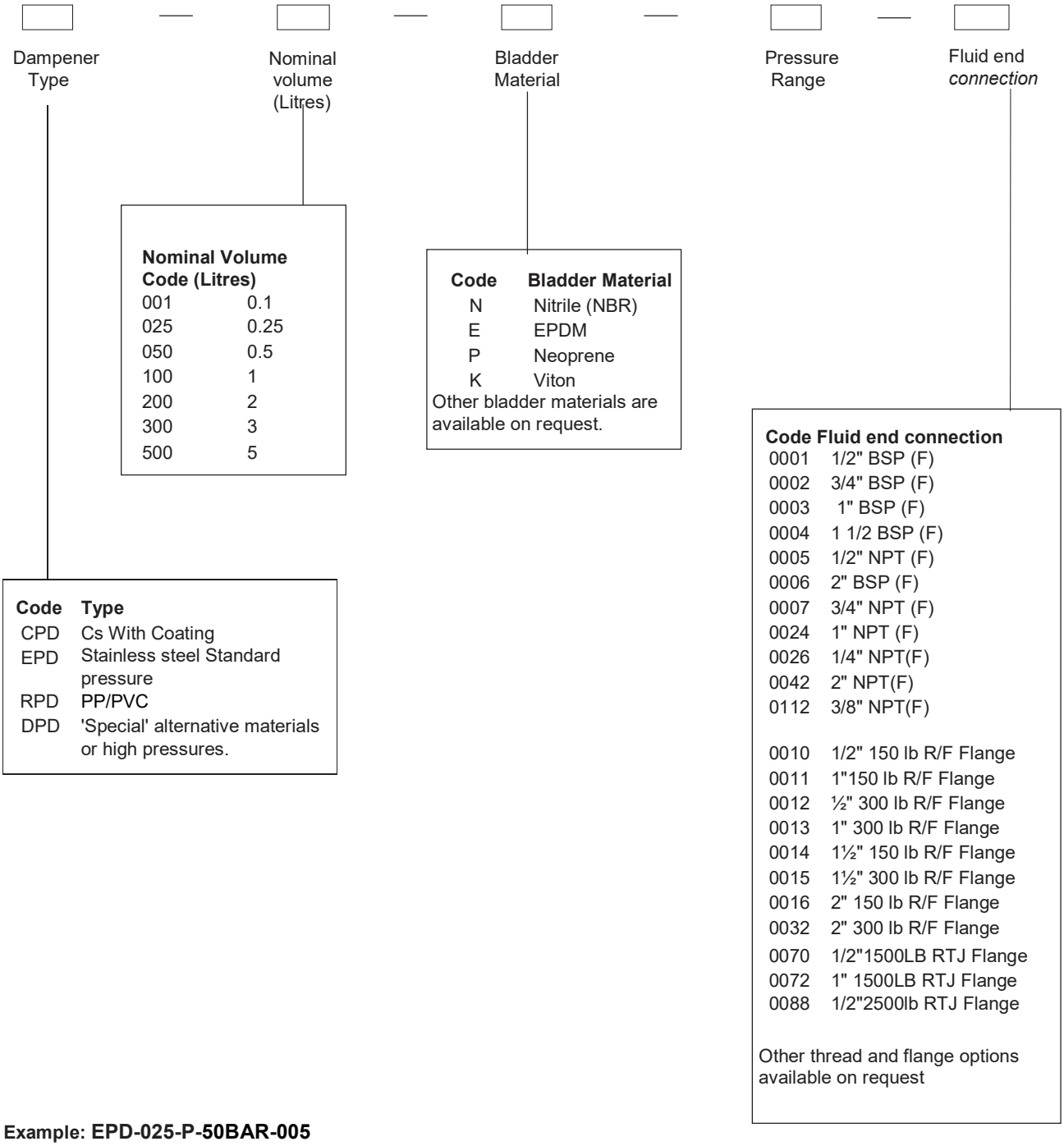
7 Pressure Testing
A hydro static pressure test is carried out on all our pulsation dampeners shells during the manufacturing process. We can carry out additional pressure testing witnessed by a specified Inspection Authority and/or customer as an optional extra if required.

We can also carry out a hydro-pneumatic pressure test on the complete assembly as an optional extra if required. Again this can be witnessed by a specified inspection authority and/or customer.

8 Accessories
A complete range of dampener charging equipment is available from Prikosa.

9 Spare Parts
Available on request.

How to Order Pulsation Dampeners



Example: EPD-025-P-50BAR-005

Damper Type	Standard Pressure (see page 4 for design pressure)
Nominal Volume (litres)	0.25 litre
Bladder Material **Pressure Range** **Fluid End Connection**	Neopren 50 Bar ½" NPT (F)

Capacities and Dimensions EPD Range

	Volume (litres)						
	0.1	**0.25**	**0.5**	**1**	**2**	**3**	**5**
Height (mm)	180	218	242	270	380	425	437
Outside Diamter (mm)	60	77	93	127	127	153	170
Weight (kg)	2.7	4.5	7.4	15	20	31	33
Design Pressure (bar)	**350**	**300**	**250**	**180**	**180**	**250**	**120**

RPD Range

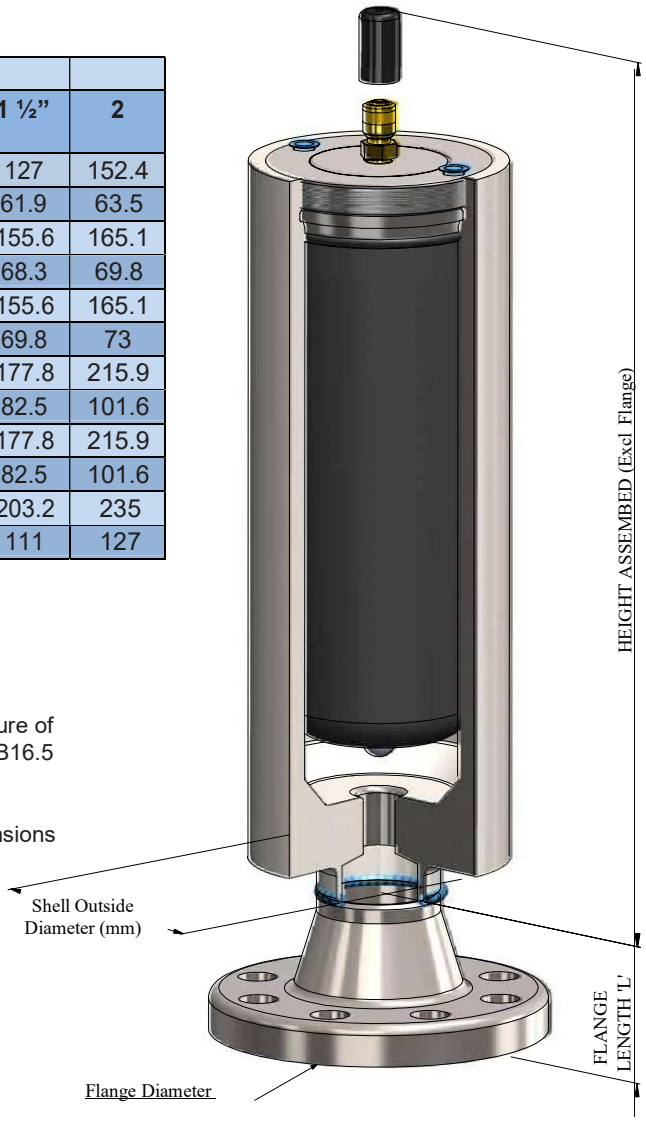
	Volume (litres)						
	0.1	**0.25**	**0.5**	**1**	**2**	**3**	**5**
Height (mm)	215	236	272	290	426	448	472
Outside Diamter (mm)	76	102	127	146	146	170	190
Weight (kg)	5.4	12	21	27	37	52	55
Design Pressure (bar)	**12**	**12**	**12**	**12**	**12**	**12**	**12**

Note: Dimensions are based on current stock and are subject to change without prior notice.

- EPD/CPD : Models have CS gas valves.
- RPD : Models have stainless steel gas valves.

Flanged Fluid End Options

		Nominal Flange Sizes					
	Dimensions (mm)	½”	¾”	1”	1 ¼”	1 ½”	2
150lb	Diameter	88.9	98.4	107.9	117.5	127	152.4
	Length “L”	47.6	52.4	55.6	57.1	61.9	63.5
300lb	Diameter	95.2	117.5	123.8	133.4	155.6	165.1
	Length “L”	52.4	57.1	61.9	65.1	68.3	69.8
600lb	Diameter	95.2	117.5	123.8	133.4	155.6	165.1
	Length “L”	52.4	57.1	61.9	66.7	69.8	73
900lb	Diameter	120.6	130.2	149.2	158.7	177.8	215.9
	Length “L”	60.3	69.8	73	73	82.5	101.6
1500lb	Diameter	120.6	130.2	149.2	158.7	177.8	215.9
	Length “L”	60.3	69.8	73	73	82.5	101.6
2500lb	Diameter	133.3	139.7	158.8	184.2	203.2	235
	Length “L”	73	79	89	95	111	127



Note: In most cases the fitting of a flange will de-rate the design pressure of the dampener if in any doubt please refer to flange specification ANSI B16.5 for the maximum working pressures.

These dimensions are weights are to be added to the dampener dimensions if a flange is required.

Note: Dimensions are based on current stock and are subject to change without prior notice.

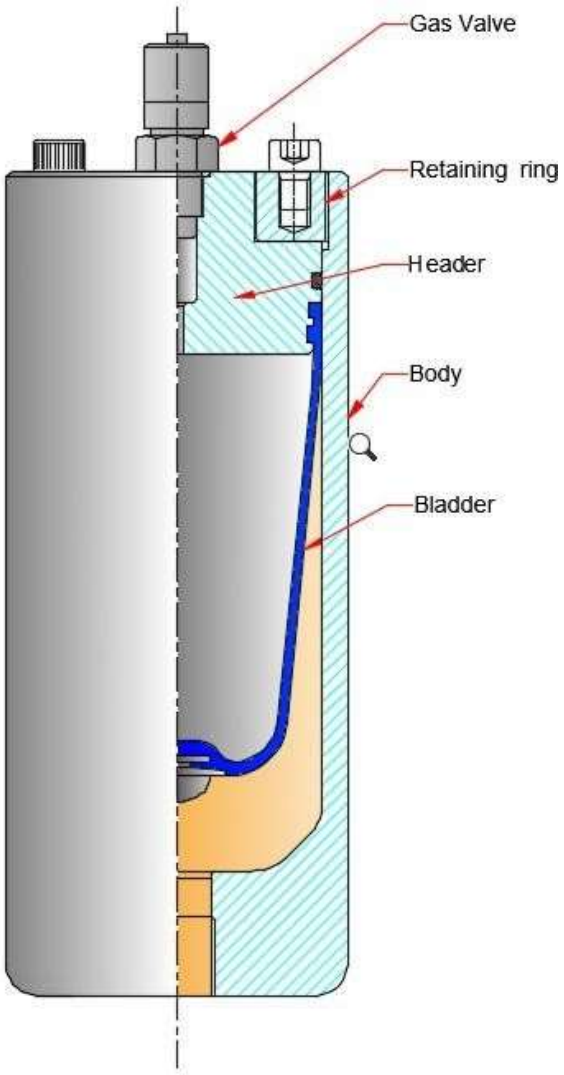
Construction features

The EPE Bladder Pulsation Dampener comprises a steel shell in which is fitted a bladder complete with a gas valve and fluid port.

• **The shell** is a pressure vessel forged or fabricated from high grade steel designed and manufactured to meet the relevant international standards. For special applications various surface coatings are available as well as a stainless steel construction.

• **The bladder,** which separates the gas from the liquid, is made in nitrile rubber in the standard version.
Bladders in butyl, neoprene, ethylene-propylene etc. are available for special uses. The main feature of the EPE bladder, which makes it unique, is the special manufacturing process thanks to which it is produced in one single piece without joints, even in the larger sizes, so as to avoid all the problems which poor gluing may involve. Another advantage of the EPD bladder is the gas valve which, not being vulcanised to the bladder, can be fit to it and removed simply and safely. For this reason the same bladder can be supplied with gas valve in different versions, or the valve can be reused, thus reducing the cost of spare parts.

• **The gas valve** is connected to the bladder by a rubber coated washer to ensure a gas tight joint and a non return valve is incorporated for bladder inflation. The bladder, complete with the gas valve, is fixed to the Dampener shell by a lock nut, and the assembly is protected by a cover.



Applications

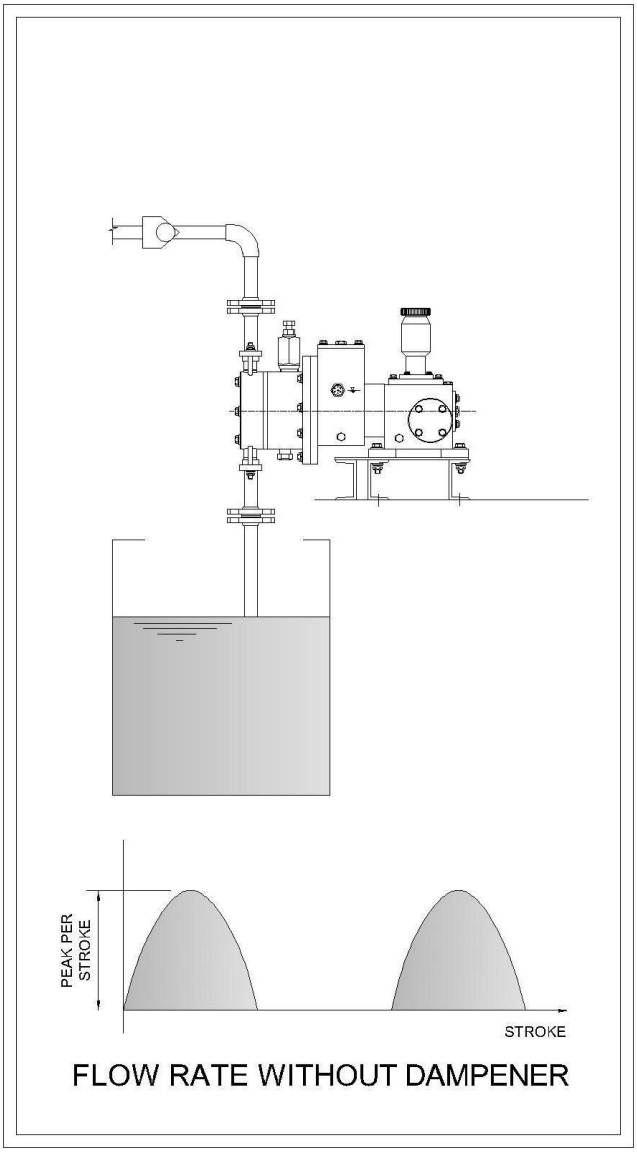
Markets Served	Applications	Diaphragm	Casing
• Chemical Process	•Transferring	NBR	SS316/SS316L
• Pulp, Paper & Textile	• Filtering	Butyl	SS304/SS304L
• Gas, Oil, & Petrochemical	•Printing	Neoprene	CS
• Biotech/Pharmaceutical	• Dosing	Viton	Other ALLOY
• Paint & Coating	• Filling		PVC/PP/PVDF
• Food & Beverage	• Metering		
• Consumer Products	• Spraying		
• Water Treatment	• Injecting		

Installation Of The Pulsation Dampener

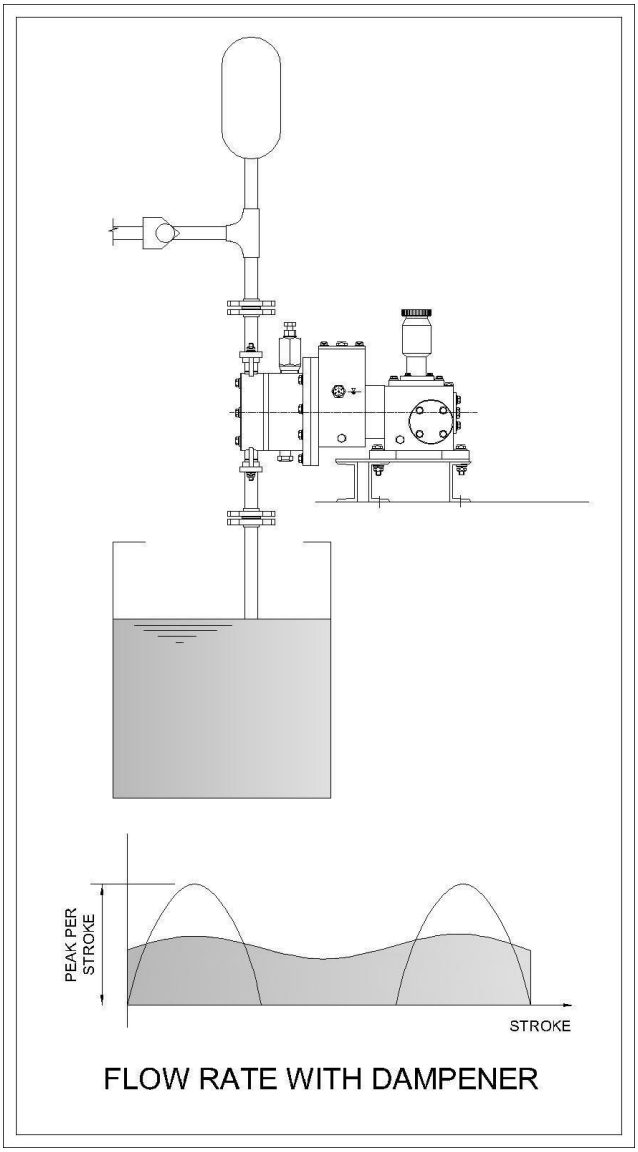
The pulsation dampener is an important element for a proper operation of the metering pumps. The installation of a pulsation dampener offers several advantages because this device:
By virtue of their design both piston and diaphragm pumps create pulsation or pressure peaks during operation, this being undesirable and detrimental for both the smooth operation and operational life of components.

Protects the metering pump against pressure peaks, thus increasing the duration of life of the pump.
Cost Savings - Pulsation Dampeners can reduce pipe work and instrumentation damage as they provide:
Removal of pressure spikes, Protection of pipe work and instrumentation, provision of continuous steady flow and reduction of System noise and Cavitation. Pump noise level reduction.
Makes the flow linear. Improved reliability and accuracy of system instrumentation.

The fitting of a Pulsation dampener near the pressure line of the pump, will damp the pulsations to an acceptable level (See Figure 5.0 & Figure 6.0) .Typical applications are: dosing pumps, pumps with a small number of pistons, etc.



FLOW RATE WITHOUT DAMPENER



FLOW RATE WITH DAMPENER

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A selected standard design from this catalogue may not confirm to the actual use of an application, clue to unknown factors in the application.
Please confirm the actual compatibility of a selected product with your application before using it.