

Pulsation dampeners

- Volumes up to 35 litres
- Pressure up to 1000 bar(g)



The pulsation dampeners or pulsation dampers are specifically designed for our dosing pumps and dosing systems. Pulsation dampeners are used to stabilize the flow and the pressure in systems with dosing pumps or other volumetric pumps.

Pulsation dampeners:

A pulsation dampener is a container with gas filling, normally nitrogen. In the pulsation dampener a separator element between the liquid and gas maintains the gas in the dampener.



Installation of pulsation dampeners:

Pulsation dampeners are often used in discharge lines to stabilize the flow and the pressure. With a pulsation dampener the flow will be more constant and the hydraulic shocks will be reduced. In suction line pulsation dampeners are used to improve the suction capabilities of the dosing pumps and to reduce acceleration losses in longer suction lines.

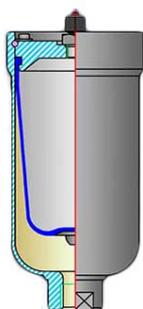
Design standard pulsation dampeners:

- The pulsation dampeners can be supplied in several materials and with a variety of connections.
- Are in compliance with PED 97/23/EC.
- Their design meets the AD-2000 and ASME VIII Div. 1 & 8 codes requirements

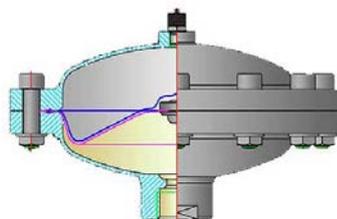
Type of pulsation dampeners:

The type of pulsation dampener is based on the design of the separator element.

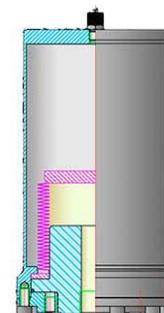
- Bladder type, U-series. Separator element is a bladder made of an elastomeric material
- Diaphragm type, M-series. Separator element is a diaphragm made of PTFE
- Bellow type, F-series. Separator element is bellow made of PTFE or SS 316L



Bladder type



Diaphragm type



Bellow type

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Connections:

The pulsation dampeners are available with the following standard connections:

- Thread connections BSPf or NPTf
- Flanged connections in accordance with DIN, ISO or ANSI

Materials:

The pulsation dampeners can be supplied in the following standards materials:

Housing:

- PVC-U, PP, PVDF, SS 316L.

Separator element. Bladder/Diaphragm/Bellow:

- Nitril, EPDM, FPM, PTFE

Other materials can be supplied upon request.



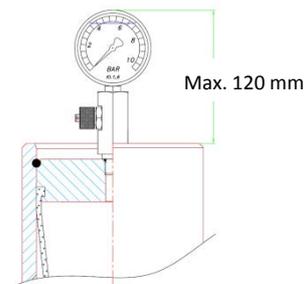
Material selection chart								
Type	PVC-U	PP	PVDF	SS 316L	Nitrile	EPDM	FPM	PTFE
Bladder	X	X	X	X	X	X	X	
Diaphragm				X				X
Bellow	X		X	X				X



Pressure gauge set:

The pulsation dampeners can be supplied with the optional pressure gauge set. With the pressure gauge set the precharge, gas filling pressure, can easily be checked.

- T-piece housing: SS 316L or PVC
- Pressure gauge: scale in accordance with the working pressure of the dampener
- Material pressure gauge: Glycerine filled stainless steel with brass connection
- Mounted on pulsation dampener



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Volume pulsation dampeners:

The pulsation dampeners are standard available with a volume up to 35 litres. The volume of the pulsation dampener is calculated by our engineers depending on the type of pump, the residual pulsation and the application.

Volume selection chart									
Pulsation dampener type:			Bladder		Diaphragm		Bellow		
Bladder	Diaphragm	Bellow	dm3	K	dm3	K	dm3	K	
U001			0,09	2,5					
U002	M002	F002	0,18	2,5	0,2		0,15		
U003	M004	F003	0,36	3	0,4		0,3		
U007	M008	F007	0,65	3,5	0,8		0,7		
U010			0,95	3					
U015	M012	F015	1,4	3,5	1,2		1,4		
U030	M030	F030	2,6	3,5	2,8	2,5	2,6	2	
U040	M040	F040	3,7	5	4,0		3,7		
U060	M060	F060	5,6	5	5,6		5,6		
U100	M100	F100	10,4	4	10		9,5		
U150			15	2,5					
U200			20	3					

Note: working pressure/precharge pressure ≤ K



Charging kit:

A charging kit for filling, purging and verifying the pressure of the pulsation dampener. Recommended for maintenance and commissioning of pulsation dampeners. Supplied for a variety of filling pressures up to 1000 bar. For low pressure filling with compressed air adaptors are available.

