

Pulsation Dampeners

Pulsation dampeners protect your pumping system and its components by removing virtually all hydraulic shock and vibration resulting from the reciprocating stroking action of a positive displacement pump.

Available in a variety of housing construction and bladder materials to cover different applications, pulsation dampeners are selected based on the size dampener (in cubic inches) needed to match your Hydra-Cell P Series pump model and discharge pulsation.

(Note: Since Hydra-Cell multiple-diaphragm model pumps provide smooth, virtually pulse-less linear flow, pulsation dampeners are recommended for P100 models, but are optional for all other models.)



Selection Process

Determine application

- Discharge pulsation (< 1000 psi or > 1000 psi)
- Inlet stabilization
 - High inlet pressure (>30 psi); or
 - Low inlet pressure (suction lift / <30 psi positive pressure)

Select dampener size (cu. in. volume)

Based on the P Series pump model and application, select the appropriate cubic inch size from the chart at right.

Select dampener model

Use the appropriate dampener size chart on pages 43 and 44 to select the specific model with the desired housing materials, bladder material, and pressure and temperature performance. (Contact Wanner Engineering for special order units with other construction materials and temperature limits.)

Bladder Options

Bladder Material	Application Recommendations
Buna-N	Good flex life; use with petroleum, solvents, and oil-based fluids
Neoprene	Good abrasion resistance and flex; use with moderate chemicals
EPDM	Good for extreme cold; good chemical resistance with ketones, caustics
FKM	Good for hot and aggressive fluids; use with aromatics, solvents, acids, and oils
PTFE	Bellows design, excellent flex life; use with highly aggressive fluids

Air Control Pump Model	Application			
	Discharge Pulsation		Inlet Stabilization	
	Chargeable <1000 psi	Chargeable >1000 psi	Chargeable >30 psi	"J" Style <30 psi
P100 (F20)	4 cu. in.	12 cu. in.	4 cu. in.	10 cu. in.
P200 (M03)	4 cu. in.	12 cu. in.	4 cu. in.	10 cu. in.
P300 (D04)	4 cu. in.	12 cu. in.	4 cu. in.	10 cu. in.
P400 (D10)	4 cu. in.	12 cu. in.	4 cu. in.	10 cu. in.
P500 (D15/D17)	4 cu. in.	12 cu. in.	10 cu. in.	10 cu. in.
P600 (H25)	10 cu. in.	N/A	10 cu. in.	10 cu. in.

Note: These are minimum size recommendations. A larger size can always be used.

4 Cubic Inch Dampeners: Inlet 1/2" (female)

Wetted	Bladder	Volume (Inch ³)	Max Pressure		Part Number	
			psi	bar	NPT Ports	BSPT Ports
SST	Buna-N	4	1000	69	110-060	110-060-B
SST	Neoprene	4	1000	69	110-062	110-062-B
SST	EPDM	4	1000	69	110-063	110-063-B
SST	FKM	4	1000	69	110-065	110-065-B
SST	PTFE	4	600	41.4	110-068	110-068-B
Hastelloy C	Buna-N	4	1000	69	110-090	110-090-B
Hastelloy C	Neoprene	4	1000	69	110-092	110-092-B
Hastelloy C	EPDM	4	1000	69	110-093	110-093-B
Hastelloy C	FKM	4	1000	69	110-095	110-095-B
Hastelloy C	PTFE	4	600	41.4	110-098	110-098-B
Polypropylene	Buna-N	4	150	10.3	110-999	110-999-B
Polypropylene	Neoprene	4	150	10.3	110-101	110-101-B
Polypropylene	EPDM	4	150	10.3	110-104	110-104-B
Polypropylene	FKM	4	150	10.3	110-106	110-106-B
Polypropylene	PTFE	4	150	10.3	110-109	110-109-B
PVDF	Buna-N	4	150	10.3	110-020	110-020-B
PVDF	Neoprene	4	150	10.3	110-022	110-022-B
PVDF	EPDM	4	150	10.3	110-023	110-023-B
PVDF	FKM	4	150	10.3	110-026	110-026-B
PVDF	PTFE	4	150	10.3	110-028	110-028-B

10 Cubic Inch Dampeners: Inlet 1/2" (female)

Wetted	Bladder	Volume (Inch ³)	Max Pressure		Part Number	
			psi	bar	NPT Ports	BSPT Ports
SST	Buna-N	10	1000	69	110-260	110-260-B
SST	Neoprene	10	1000	69	110-262	110-262-B
SST	EPDM	10	1000	69	110-263	110-263-B
SST	FKM	10	1000	69	110-265	110-265-B
SST	PTFE	10	150	10.3	110-268	110-268-B
Hastelloy C	Buna-N	10	1000	69	110-290	110-290-B
Hastelloy C	Neoprene	10	1000	69	110-292	110-292-B
Hastelloy C	EPDM	10	1000	69	110-293	110-293-B
Hastelloy C	FKM	10	1000	69	110-295	110-295-B
Hastelloy C	PTFE	10	150	10.3	110-298	110-298-B
Polypropylene	Buna-N	10	150	10.3	110-100	110-100-B
Polypropylene	Neoprene	10	150	10.3	110-232	110-232-B
Polypropylene	EPDM	10	150	10.3	110-233	110-233-B
Polypropylene	FKM	10	150	10.3	110-105	110-105-B
Polypropylene	PTFE	10	150	10.3	110-108	110-108-B
PVDF	Buna-N	10	150	10.3	110-220	110-220-B
PVDF	Neoprene	10	150	10.3	110-222	110-222-B
PVDF	EPDM	10	150	10.3	110-223	110-223-B
PVDF	FKM	10	150	10.3	110-225	110-225-B
PVDF	PTFE	10	150	10.3	110-228	110-228-B

10 Cubic Inch Inlet Stabilizers with J-Style Control: Inlet 1/2" (female)

Wetted	Bladder	Volume (Inch ³)	Max Pressure		Part Number	
			psi	bar	NPT Ports	BSPT Ports
CPVC	Buna-N	10	30	2	110-210-J	110-210-J-B
CPVC	Neoprene	10	30	2	110-212-J	110-212-J-B
CPVC	EPDM	10	30	2	110-213-J	110-213-J-B
CPVC	FKM	10	30	2	110-215-J	110-215-J-B
CPVC	PTFE	10	30	2	110-218-J	110-218-J-B

12 Cubic Inch Dampeners: Inlet 1/2" (female)

Wetted	Bladder	Volume (Inch ³)	Max Pressure		Part Number	
			psi	bar	NPT Ports	BSPT Ports
SST	Buna-N	12	4000	276	110-370	110-370-B
SST	EPDM	12	4000	276	110-373	110-373-B
SST	FKM	12	4000	276	110-375	110-375-B
SST	PTFE	12	2000	138	110-368	110-368-B

Pulsation Dampener Charging Kits

Part Number	Description
110-900	Pulsation Dampener Charging Kit to 999 psi (68.9 bar)
110-901	Pulsation Dampener Charging Kit 1000 to 5000 psi (69 to 345 bar)