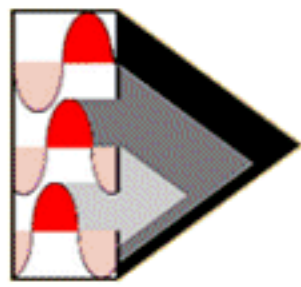


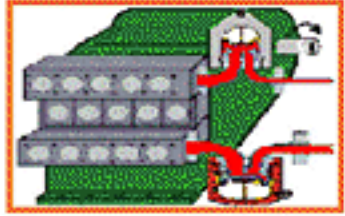
Pulsation Damper Size Selection Tables for use with Multiplex "Power Pumps"



1. Dampers listed below are from 1000s of "off the shelf" inventory dampers, \$s & Dimensions tabulated for you at www.pulseguard.com. Call toll free 1-888-DAMPERS(326-7377) for discounts etc. Choose a damper matching your pump connection size, for standard damping. Or allow us to calculate for you, from your smoothness required and your system data.



When you see a damper or a pump of particular interest, please request literature dedicated to that subject.



Where there is no occupational health and safety need for in-place flush through before servicing, nor any process requirement for constant temperature, or first in first out need to control residence time, not even clean before changing liquid, it is still least expensive to use a standard twin connection damper, and save a "T" by using the other connection for the system drain, R.V. gauge, or branch. WaveGuard and DAMPERS for frequencies above 10 Hz, and or systems in which pipe-run or tube nodes are less than 290 meters /950 ft have to be "Flow-Through"

A20 = Alloy 20, H22 = Hasteloy 22, Ti2 = Titanium 2, Tan = Tantalum, Zir Zirconium, DSS = Duplex Stainless, SDSS = Super Duplex.

PumpGuard For Suction systems, No N2 Or Air Pre-Fill required. Remove volumetric acceleration head losses

Model Number For Ordering	Vol. Gls.	Pres. @93 C Lbs/in ²	Wetted your choice Dims. For	Connections To Pump to Sys. Inch Inch	Connct. Type	Spare Kit	Length L Inch.	Diam D Inch	Weight in 316ss Lbs.
PwrP-Pug 690	/ 3g	/ 1000p	/ 316L	/ 2 x 2	Mnpt	T74x58x1562x122 ?/	64	6.6	100
PwrP-Pug 1155	/ 5g	/ 1000p	/ 316L	/ 3 x 3	600#	/T120x100x1210x190 ?/	55	8.6	200
PwrP-Pug 2310	/ 10g	/ 1000p	/ 316L	/ 4 x 4	600#	/T120x100x1040x252 ?/	45	10.7	350
PwrP-Pug 3465	/ 15g	/ 1000p	/ 316L	/ 6 x 6	600#	/T185x165x1040x242 ?/	45	12.7	450
PwrP-Pug 4620	/ 20g	/ 1000p	/ 316L	/ 8 x 8	600#	/T239x219x1550x260 ?/	65	14	950
PwrP-Pug9000	/ 39g	/ 600p	/ 316L	/ 10x10	300#	/T274x249x1448x320 ?/	64	17.9	1220
PwrP-Pug18000	/ 79g	/ 600p	/ 316L	/ 12x12	300#	/T342x318x2110x380 ?/	91	21.9	2875

WaveGuard No Moving Parts, No N² Or Air Pre-Fill reqd. With Ceramics

Model Number For Ordering Acoustic Interceptors	"e" Nbr. Equivalent	Pres. @93 C Lbs/in ²	Wetted your choice Dims. For	Connections To Pump to Sys. Norm.	Connct. Type	Length L Inch.	Diam D Inch	Weight in 316ss Lbs.
PwrP-Wag/Cer / 0.3e	0.3	7,000		3/8" - 1/4"	F NPT	21	1.9	
PwrP-Wag/Cer / 0.6e	0.6	6,000		1/2" - 3/8"	F NPT	23	2.4	
PwrP-Wag/Cer / 1.0e	1.0	6,500		3/4" - 1/2"	F NPT	24	2.9	
PwrP-Wag/Cer / 2.5e	2.5	5,800		1.0" - 0.75"	F NPT	38	3.5	
PwrP-Wag/Cer / 5.0e	5.0	4,400		1.25" - 1.0"	MNPT	40	4.5	
PwrP-Wag/Cer / 8.5e	8.5	4,800		1.5" - 1.25"	MNPT	48	5.6	
PwrP-Wag/Cer / 14e	14	4,300		2.0" - 1.5"	MNPT	55	6.6	
PwrP-Wag/Cer / 25e	21	3,300		3.0" - 2.5"	2500#	55	8.6	
PwrP-Wag/Cer / 40e	30	3,000		4.0" - 3"	2500#	56	10.8	
PwrP-Wag/Cer / 57e	40	3,400		5.0" - 4"	2500#	57	12.8	
PwrP-Wag/Cer / 88e	88	3,200		6.0" - 5"	2500#	60	16.0	
PwrP-Wag/Cer / 155e	155	3,200		8.0" - 6"	2500#	72	20.0	

PipeHugger HP Pulsation Interceptor/Isolators, liquid in bladder.

Model Number For Ordering	Vol. In ³	Pres. @93 C Lbs/in ²	Wetted your choice Dims. For	Connections Max on Piping Base To Pump to Sys.	Connct. Type	Spare Kit	Length L Inch.	Diam D Inch	Weight in 316ss Lbs.
PwrP-PHR"0"-8	/ 8i	/ 4200p	/ 316L /+PB2.5	0.50" x 0.50" / F npt	D64L	?	6.7	3.9	13
PwrP-PHR"0"-18	/ 18i	/ 5500p	/ 316L /+PB3.0	0.75" x 0.75" / F npt	D75L	?	8.5	4.5	25
PwrP-PHR"0"-40	/ 40i	/ 5250p	/ 316L /+PB4.0	1.0" x 1.0" / F npt	D100L	?	11.0	5.9	52
PwrP-PHR"0"-61	/ 61i	/ 4300p	/ 316L /+PB5.0	1.25" x 1.25" / M npt	D125L	?	11.2	7.0	75
PwrP-PHR"0"-122	/ 122i	/ 3950p	/ 316L /+PB6.0	1.5" x 1.5" / M npt	D150L	?	13.0	7.9	122
PwrP-PHR"0"-200	/ 200i	/ 2000p	/ 316L /+PB8.0	2.0" x 2.0" / M npt	D191M	?	10.0	8.5	56
PwrP-PHR"0"-400	/ 400i	/ 3000p	/ 316L /+PB9.0	2.5" x 2.5" / 37° BW	D220L	?	15.0	11	170
PwrP-PHR"0"-600	/ 600i	/ 3250p	/ 316L /+PB10	3.0" x 3.0" / 37° BW	D254L	?	16.0	13	290
PwrP-PHR"0"-999	/ 999i	/ 3000p	/ 316L /+PB12	4.0" x 4.0" / 37° BW	D328L	?	20.0	16	490

PipeHugger LP No flow reversal pressure loss in a single connection Perfect suction acceleration head loss recovery.

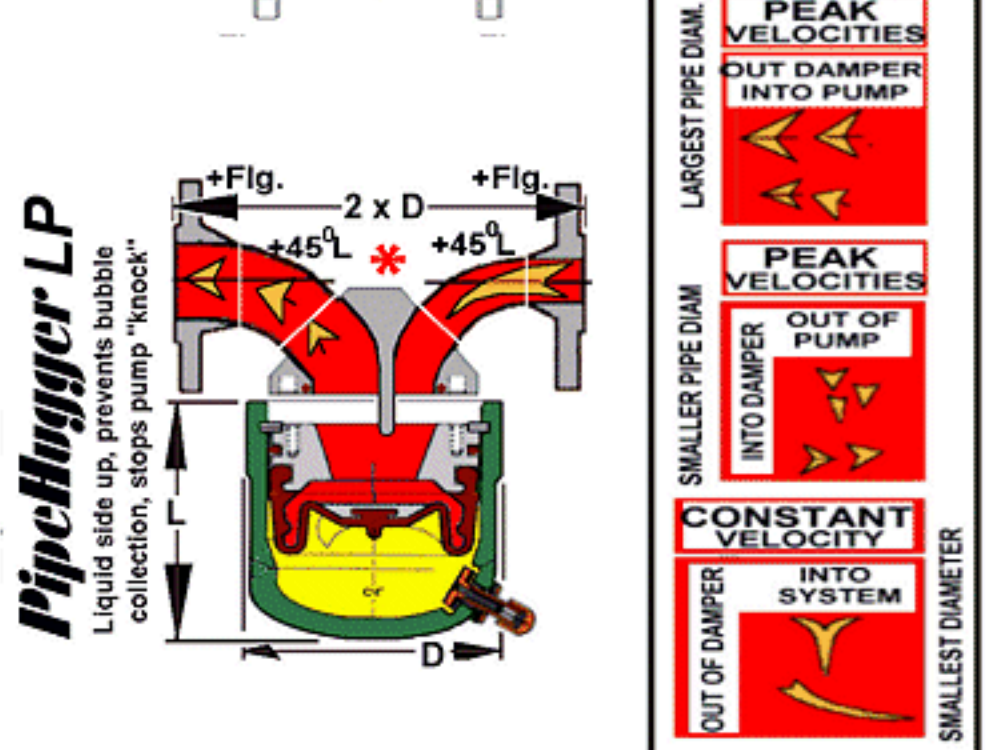
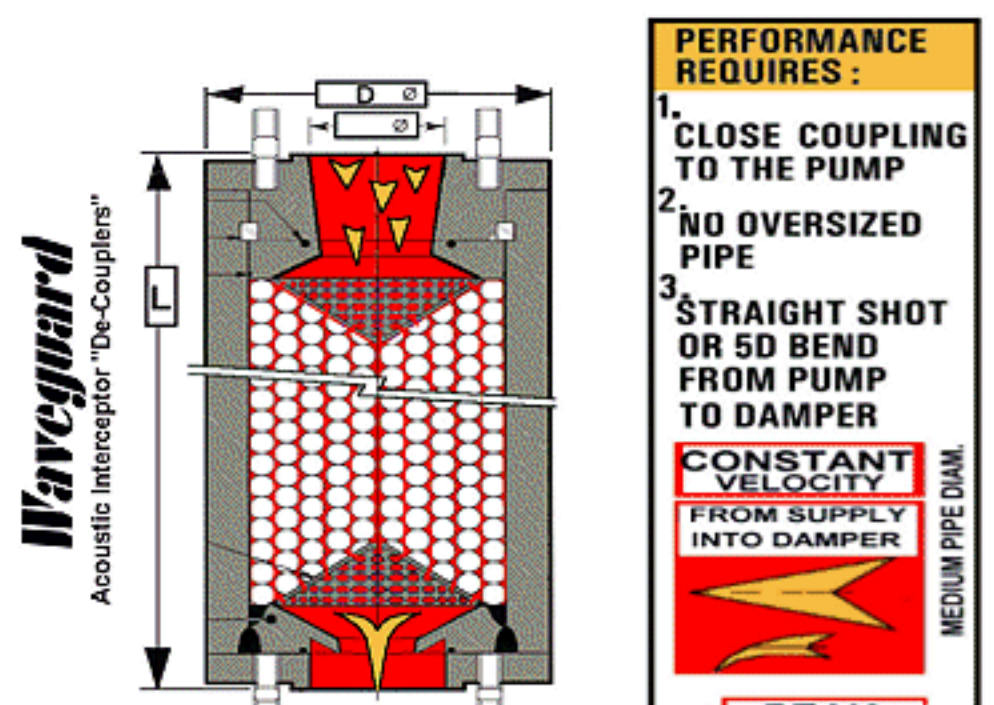
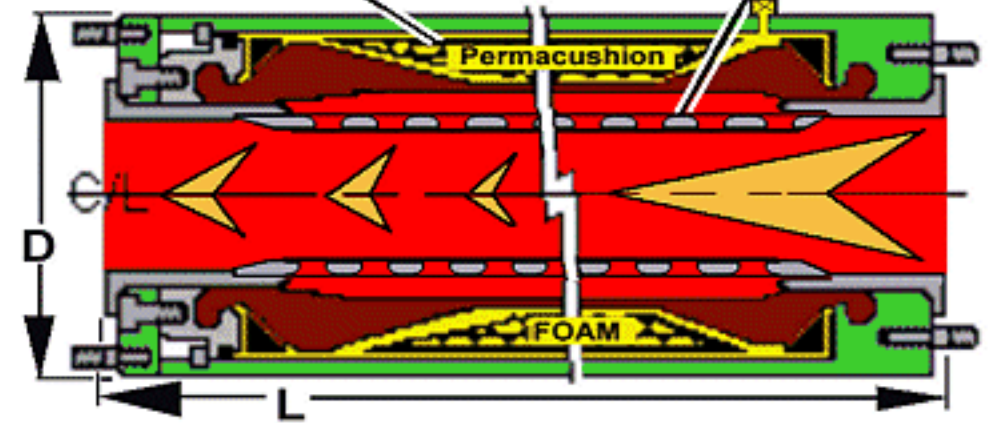
PwrP-PHRLP"0"-20	/ 20i	/ 650p	/ 316L /+PB4.0	1.0" x 1.0" / F npt	D85L	?	5.4	4.0	10
PwrP-PHRLP"0"-40	/ 40i	/ 600p	/ 316L /+PB5.0	1.25" x 1.25" / M npt	D115L	?	6.3	5.0	17
PwrP-PHRLP"0"-90	/ 90i	/ 500p	/ 316L /+PB6.0	1.5" x 1.5" / M npt	D145L	?	6.9	6.5	21
PwrP-PHRLP"0"-180	/ 180i	/ 400p	/ 316L /+PB8.0	2.0" x 2.0" / M npt	D191L	?	8.5	8.5	38
PwrP-PHRLP"0"-360	/ 360i	/ 400p	/ 316L /+PB9.0	2.5" x 2.5" / 37° BW	D244L	?	9.4	10.4	55
PwrP-PHRLP"0"-720	/ 720i	/ 250p	/ 316L /+PB12	3.0" x 3.0" / 37° BW	D285L	?	10.1	12.7	80
PwrP-PHRLP"0"-999	/ 999i	/ 200p	/ 316L /+PB14	4.0" x 4.0" / 37° BW	D328L	?	14.0	14	130
PwrP-PHRLP"0"-1500	/ 1500i	/ 200p	/ 316L /+PB16	5.0" x 5.0" / 37° BW	D368L	?	16.0	16	210
PwrP-PHRLP"0"-2500	/ 2500i	/ 200p	/ 316L /+PB20	6.0" x 6.0" / 37° BW	D450L	?	20.0	20	490

PipeGuard HP for Discharge PipeGuard LP for Suction

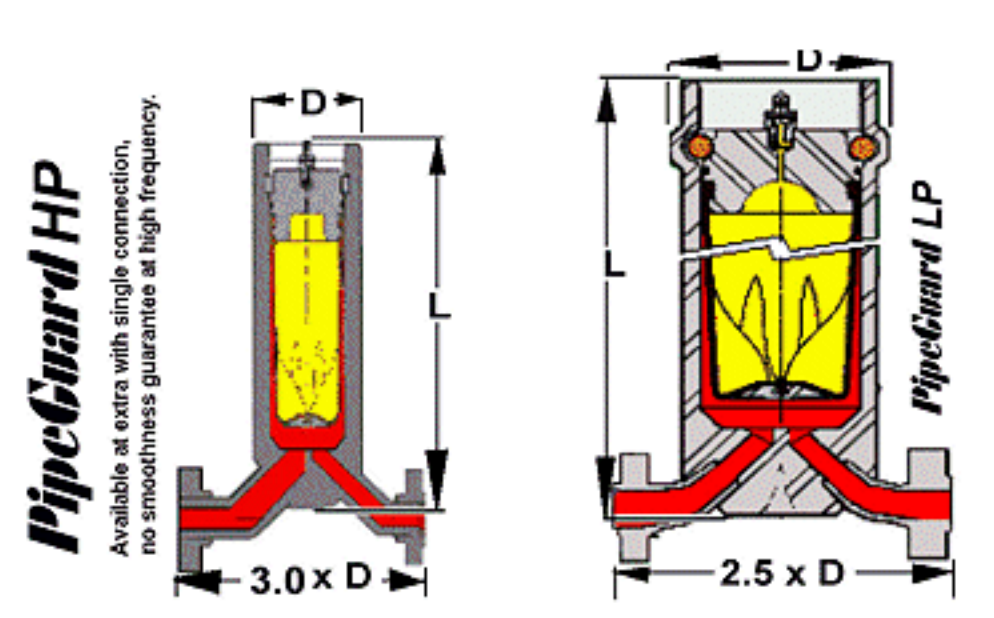
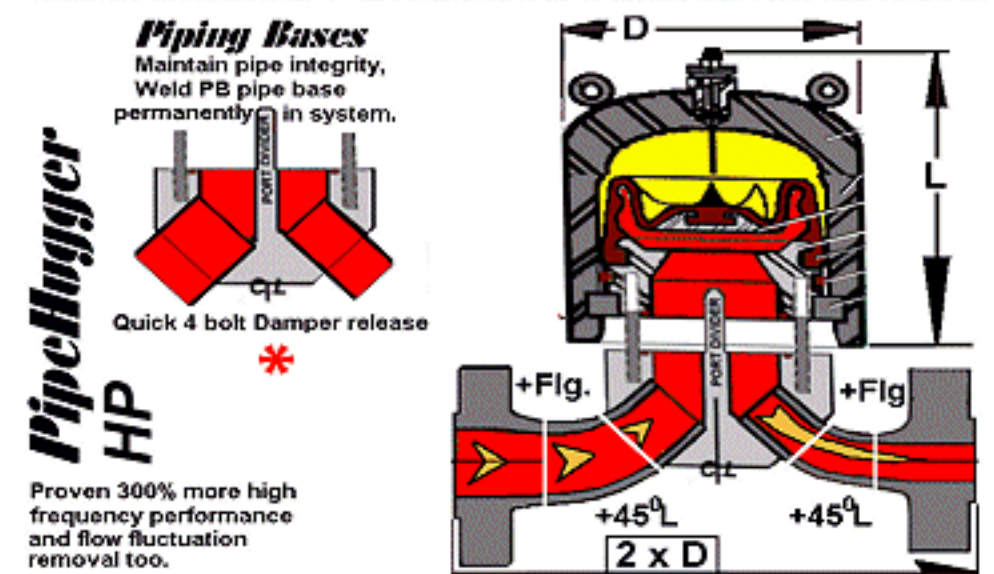
The original 1965 One piece molded gas bags, in all stainless shells from the originators. Available connections to 15,000psi with GL / SBL Hubs, or Autoclave/PPI For use in externally corrosive environments. Due to lack of space please GOTO > <http://www.accumulators.co.uk> and www.accumulators-hyd.com

* The question mark "?" = Letters, showing your choice of compatible elastomer, add the letter to ordering Pt. Nbr. - N=Buna N, E=EP, H=Hypalon, x V=Fluoro-Carbon, x x= addition to cost

PumpGuard with PermaCushion For suction & LP discharge



CAPACITANCE + DIRECTION CHANGE IMPEDANCE



PUMPS make FLOW, SYSTEMS cause PRESSURE, pressure pulsation is a system response, AND a system responsibility NOT a pump manufacturers liability.

* For piping bases GOTO http://www.pulseguard.com/pulsation_dampening/select_flow_or_pressure/flow_or_pressure/pipe_method/pipe_method.htm