

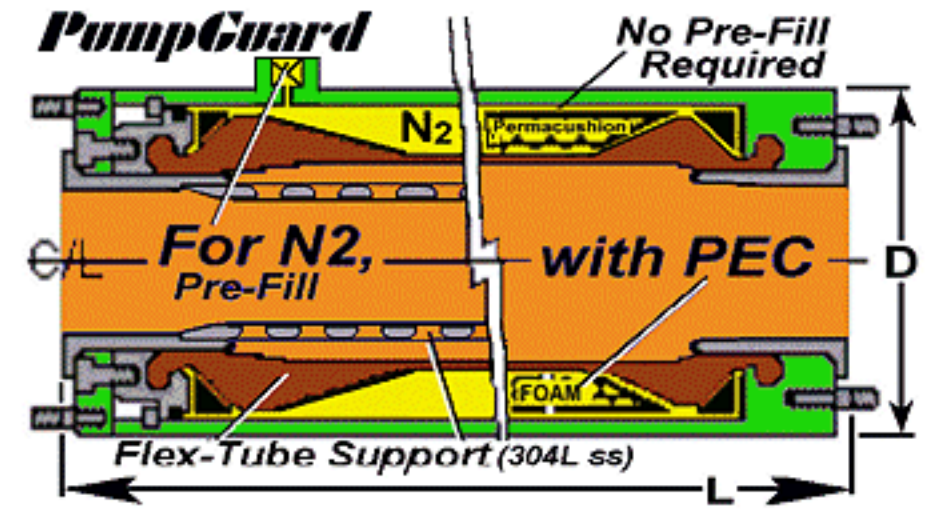


**1** Dampers listed below are from 1000s of "off the shelf" inventory dampers, for preventing pipe systems from converting hose flow fluctuation into pressure pulsation. Prices are tabulated for you at [www.pulseguard.com](http://www.pulseguard.com). Call toll free 1-888-DAMPERS(326-7377) for discounts 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.

**2.** Where no OSHA requirement for in place flush before service, nor process need for 1st in 1st out, constant temp., change of liquid pumped, interception of pressure pulsation ; use second connection to save a "T" for RV, PI, or System Drain. 2 connection dampers are standard lowest cost. Pressure Pulsation Dampers for 10Hz & above, IE systems 300 meters (1000 ft.) or less, must use FLOW-THROUGH.



**PumpGuard LP** Where you have 4 to 6 feet available directly on to the pump : An elastomeric "hose" damper for elastomeric hose pumps.

Please State Material preferences and model Number below when ORDERING :	Connections To Pump to Sys. Inch Inch	Connct Type	Length L Inch	Diam D Inch	Weight in 316 Lbs.	Vol. Gls.	Pres. @93 C Lbs/in <sup>2</sup>	Wetted your choice Dims. For	Spares Kit FlexTube *
Hose-Pug 690	2 x 2	Mnpt	64	6.6	100	3g	200p	316L / T74x58x1562x122	?
Hose-Pug 1155	3 x 3	150 #	55	8.6	200	5g	200p	316L / T120x100x1210x190	?
Hose-Pug 2310	4 x 4	150 #	45	10.7	350	10g	200p	316L / T120x100x1040x252	?
Hose-Pug 3465	6 x 6	150 #	45	12.7	450	15g	200p	316L / T185x165x1040x242	?
Hose-Pug 4620	8 x 8	150 #	65	14	950	20g	200p	316L / T239x219x1550x260	?

**Flexorber VLP** with Flexflon, & PTFE for those aggressive liquids Do not lose two thirds of the smoothness performance by being off line on a "T".

Please State Material preferences and model Number below when ORDERING :	Connections Max on Piping Base To Pump to Sys.	Connct. Type	Length L Inch	Diam D Inch	Weight in 316 Lbs.	Vol. in <sup>3</sup>	Pres. @93 C Lbs/in <sup>2</sup>	Wetted your choice Dims. For	Spares Kit FlexFlon *
Hose-Sog-Vlp75	+PB5 1.0" x 1.0"	37° BW	10.0	11	38	75i	200p	316L / DW187BF	
Hose-Sog-Vlp150	+PB6 1.5" x 1.5"	37° BW	10.5	11.4	60	150i	150p	316L / DW223BF	
Hose-Sog-Vlp230	+PB7 2.0" x 2.0"	37° BW	12.3	13.8	95	230	200p	316L / DW268BF	
Hose-Sog-Vlp330	+PB8 2.5" x 2.5"	37° BW	13.5	16	130	330	150p	316L / DW305BF	
Hose-Sog-Vlp450	+PB10 3.0" x 3.0"	37° BW	14.2	18	160	450i	200p	316L / DF345Teflon	
Hose-Sog-Vlp900	+PB12 4.0" x 4.0"	37° BW	18	24	290	900i	150p	316L / DF450Teflon	

**PipeHugger LP** Economical - Liquid in the bag, Air in the shell Shorter In to Out dimension than PumpGuard. Higher performance.

Please State Material preferences and model Number below when ORDERING :	Connections Max on Piping Base To Pump to Sys.	Connct. Type	Length L Inch	Diam D Inch	Weight in 316 Lbs.	Vol. in <sup>3</sup>	Pres. @93 C Lbs/in <sup>2</sup>	Wetted your choice Dims. For	Spares Kit *
Hose-PhrLP"0"90	+PB6.0 1.0" x 1.0"	M npt	6.9	6.5	21	90i	500p	316L / D145L	?
Hose-PhrLP"0"180	+PB8.0 1.5" x 1.5"	M npt	8.5	8.5	38	180i	400p	316L / D191L	?
Hose-PhrLP"0"360	+PB9.0 2.0" x 2.0"	37° BW	9.4	10.4	55	360i	400p	316L / D244L	?
Hose-PhrLP"0"720	+PB12 3.0" x 3.0"	37° BW	10.1	12.7	80	720i	250p	316L / D285L	?
Hose-PhrLP"0"999	+PB14 4.0" x 4.0"	37° BW	14.0	14	130	999i	200p	316L / D328L	?
Hse-PhrLP"0"1500	+PB16 6.0" x 6.0"	37° BW	16.0	16	210	1500	200p	316L / D368L	?

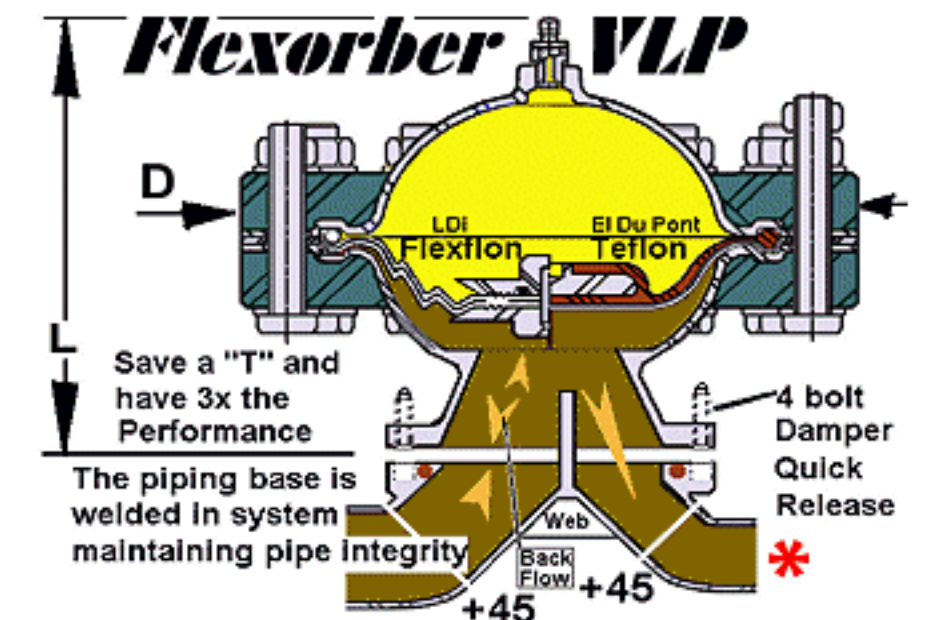
**PipeGuard - Plas** For flow fluctuation only. Pressure waves will by-pass Where plastics are absolutely specified, and there is no danger from fracture.

Please State Material preferences and model Number below when ORDERING :	Connection To Run of Your "T"	Connct. Type	Length L Inch	Diam D Inch	Weight in PP Lbs.	Vol. in <sup>3</sup>	Pres. @ 50 C Lbs/in <sup>2</sup>	Wetted your choice PP or	Spares Kit *
Hose-PigPlas 40	1.0" MNPT <sub>or</sub> + Flg		16	3.5	6	40i	150p	PVC	/B63 x190 ?
Hose-PigPlas 90	1.5" MNPT <sub>or</sub> + Flg		19	5.3	9	90i	150p	PVC	/B98 x232 ?
Hose-PigPlas180	2.0" MNPT <sub>or</sub> + Flg		17	7.5	20	180i	125p	PVC	/B139x178 ?
Hose-PigPlas488	3.0" Socket <sub>or</sub> + Flg		26	7.5	23	488i	125p	PVC	/B139x420 ?
Hose-PigPlas1000	4.0" Socket <sub>or</sub> + Flg		40	8.6	68	1000i	102p	PVC	/B195x720 ?
Hose-PigPlas3000	6.0" Socket <sub>or</sub> + Flg		44	11	96	3000i	90p	PVC	/B250x775 ?

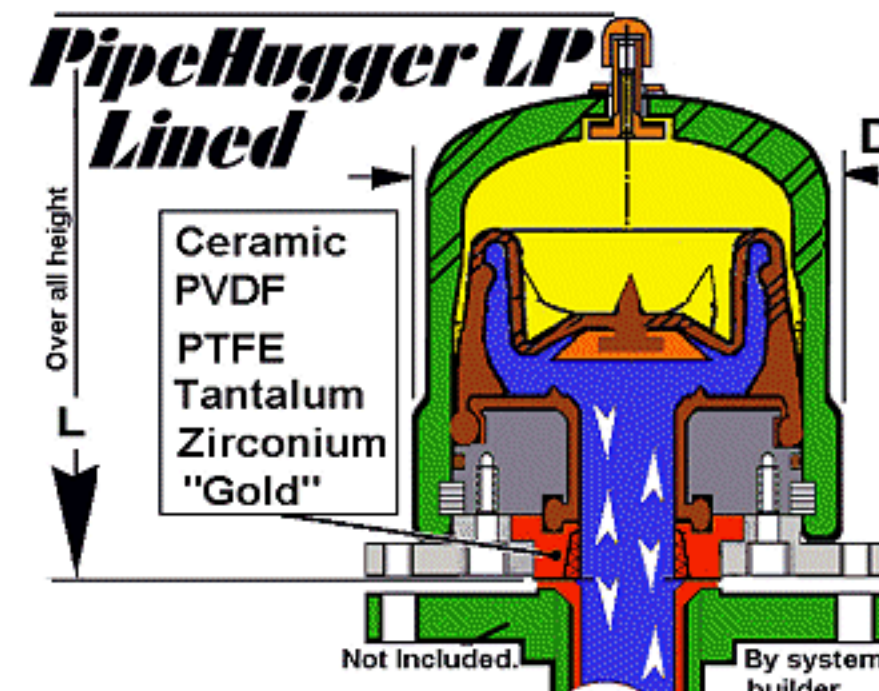
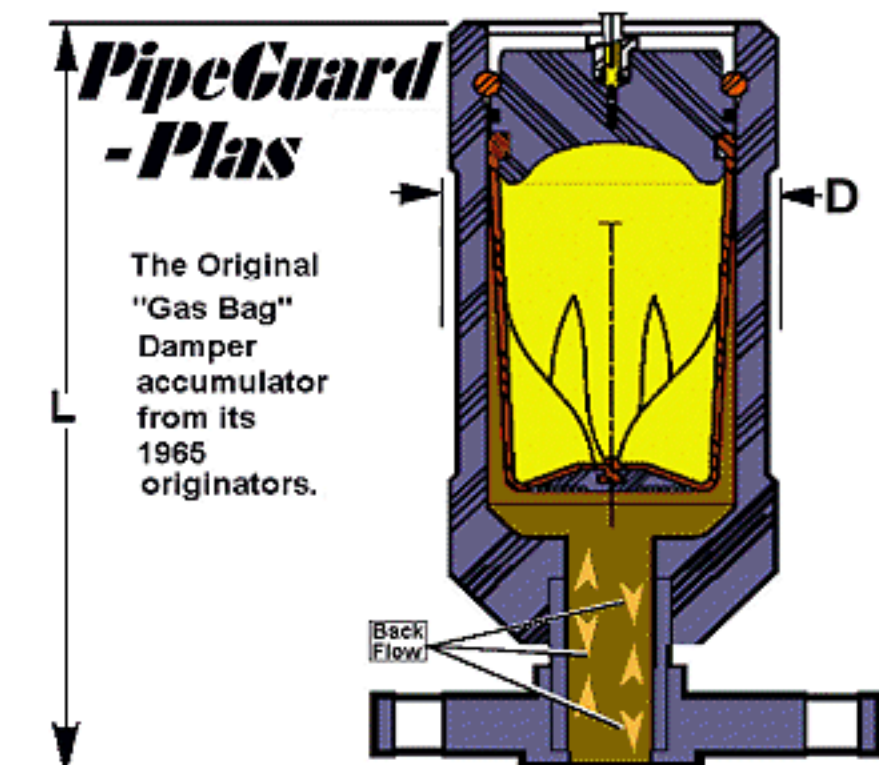
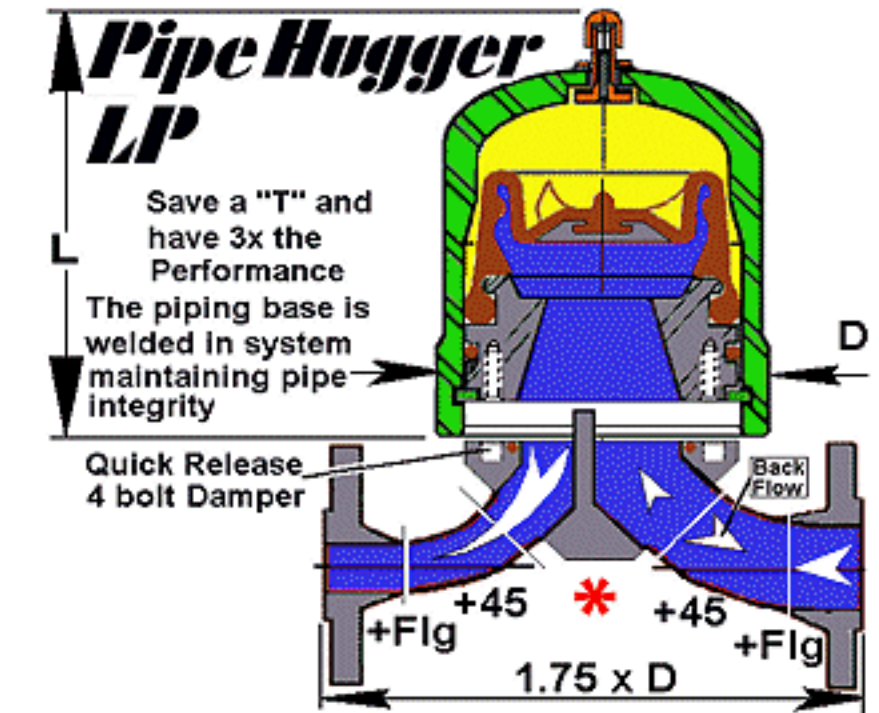
**PipeHugger LP-Lnd** Replaceable Elastomer Lining - Same Mtl. as bladder The low cost answer to special high cost materials for liquid compatibility. Or use for the safety of metal but plastic wetted.

Please State Material preferences and model Number below when ORDERING :	Connection To Run of Your "T"	Length L Inch	Diam D Inch	Weight in 316 Lbs.	Vol. in <sup>3</sup>	Pres. @ 93 C Lbs/in <sup>2</sup>	Wetted your choice	Spares Kit *
Hos-Phr-Lnd-FF 90	/Rf+PCD of 1"150#	7.9	6.5	21	90i	225p	Tan ?	/Lnr +D145L ?
Hos-Phr-Lnd-FF 180	/Rf+PCD of 2"150#	10.0	8.5	38	180i	225p	Zir ?	/Lnr +D191L ?
Hos-Phr-Lnd-FF 360	/Rf+PCD of 3"150#	11.4	10.4	55	360i	225p	Has 276 ?	/Lnr +D244L ?

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



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\\_smooth\\_percentage/flow\\_or\\_pressure/find\\_pump\\_fcalc\\_damper\\_volume/select\\_pipe\\_method/pipe\\_method.htm](http://www.pulseguard.com/pulsation_dampening/select_smooth_percentage/flow_or_pressure/find_pump_fcalc_damper_volume/select_pipe_method/pipe_method.htm)