



**1** Dampers listed below are from 1000s of "off the shelf" inventory dampers, for preventing pipe systems from converting decompression shots 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. Decompression shot interceptors, & for frequencies above 10Hz, (from short pipes) must be FLOW-THROUGH



**DAMPERS TO INTERCEPT SHOCK FROM INTENSIFIERS**

**PipeGuard UHP & HP With Super Duplex and Duplex Stainless bodies. For Offshore and corrosive environment applications 100:1 Pumps**

Please State Material preferences and model Number below when ORDERING:	Connections To Pump to Sys.	Connct. Type	Length (without Face) L Inch.	Diam D Inch.	Weight Lbs.	Vol. In3	Pres. @ 93 G Lbs/in <sup>2</sup>	Wetted your choice Dims. For	Spares Kit	*
Hplnt-Pig-HP-6	AutoClave / PPI	SF562	7.5	3.5	17	6	15,000	DSS	B44x75	?
Hplnt-Pig-HP-15	AutoClave / PPI	SF750	10	4.0	26	15	11,250	DSS	B57x98	?
Hplnt-Pig-HP-60	GrayTecLokHub	1GR5 1GR4	16	5.1	70	60	11,000	SDSS	B72x255	?

**For use with 25:1 ratio pumps, flow smoothing PIPEGUARD MP to suit piping bases**

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Hplnt-Pig-MP-120	1" x 1"	Sch 160	11.8	6.7	65	120	3,500	316 L	B139x105	?
Hplnt-Pig-MP-240	1.5" x 1.5"	Sch 160	15.7	6.7	81	240	3,500	316 L	B139x205	?
Hplnt-Pig-MP-460	2" x 2"	Sch 160	24	6.7	101	460	3,500	316 L	B139x420	?
Hplnt-Pig-MP-693	2.5" x 2.5"	Sch 160	24	8.62	212	693	3,100	316 L	B195x 360	?

**PipeGuard LP Fill the fast return stroke, stops lost motion, so smooth the discharge.**

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Hplnt-Pig-Lp 1	/1/4"Fx1/8" F npt		4.1	1.4	2.6	1.0i	1000p	316/	B25x50	?
Hplnt-Pig-Lp 6	/3/8"Fx1/4" F npt		6.0	2.0	3.0	6.0i	700p	316/	B44x75	?
Hplnt-Pig-Lp 15	/1/2"Fx3/8" F npt		7.5	2.5	5.5	15i	600p	316/	B57x98	?
Hplnt-Pig-Lp 40	/3/4"Fx1/2" F npt		12.75	2.8	7.0	40i	600p	316/	B63x207?	?

**Flexorber HP with FLEXFLOW PTFE For purity. For corrosive liquids. 40:1**

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Hplnt-Flo 61	1.0" x 1.0"	Sch XX	10.0	12.5	300	61	5,500	316 L	DW 187tfe	
Hplnt-Flo 80	1.25" x 1.0"	Sch XX	11.0	13.5	350	80	5,250	316 L	DW 200tfe	
Hplnt-Flo 122	1.5" x 1.25"	Sch XX	11.5	14	400	122	5,000	316 L	DW 223tfe	

**Flexorber LP with FLEXFLOW PTFE For Purity. For Corrosive Liquids Prevents lost volume on the fast return / suction stroke; so stops discharge shock**

Please State Material preferences and model Number below when ORDERING:	Connections To Pump to Sys.	Connct. Type	Length (without Face) L Inch.	Diam D Inch.	Weight Lbs.	Vol. In3	Pres. @ 93 G Lbs/in <sup>2</sup>	Wetted your choice Dims. For	Spares Kit	*
Hplnt-Sog8	/1/4x1/8" M npt/		4.5	6.5	10	7.5i	300p	316/DW113BF	tfe	
Hplnt-Sog15	/3/8"x1/4" M npt/		6.0	6.5	15	15i	300p	316/DW123BF	tfe	
Hplnt-Sog30	/1/2"x3/8" M npt/		7.0	7.8	20	30i	300p	316/DW143BF	tfe	
Hplnt-Sog60	/3/4"x1/2" M npt/		8.0	8.2	19	60i	250p	316/DW175BF	tfe	

**PipeHugger HP With an Elastomer Bladder. Large diameter relative to port holes enables dissipation of the pressure wave from pump cylinder de-compression. For 40:1 pumps.**

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Hplnt-Phr-40	1/2" x 3/8"	F NPT	11	5.9	52	40	5,250	316 L	D100L	?
Hplnt-Phr-61	3/4" x 1/2"	F NPT	11.2	7.0	75	61	4,300	316 L	D125L	?
Hplnt-PhrO-122	1.25" x 1.0"	Sch 160	13	7.9	112	122	3,950	316 L	D145L	?

**PipeHugger LP Large diameter Bladder ensures sensitive response at low pressure. Prevents lost volume on the fast return / suction stroke; so stops discharge shock**

Please State Material preferences and model Number below when ORDERING:	Connections To Pump to Sys.	Connct. Type	Length (without Face) L Inch.	Diam D Inch.	Weight Lbs.	Vol. In3	Pres. @ 93 G Lbs/in <sup>2</sup>	Wetted your choice Dims. For	Spares Kit	*
Hplnt-Peg10	/1/8"Fx1/8" F npt		5.4	3.0	5	10i	750p	316 /	D64 L	?
Hplnt-Peg20	/3/8"Fx3/8" F npt		5.4	4.0	10	20i	650p	316 /	D85 L	?
Hplnt-Peg40	/1/2"Fx3/8" F npt		6.3	4.0	12	40i	600p	316 /	D115L	?

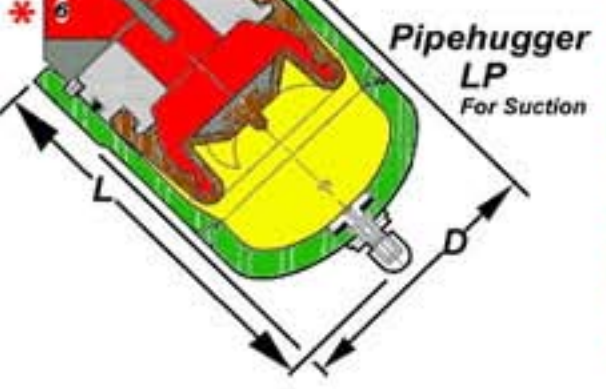
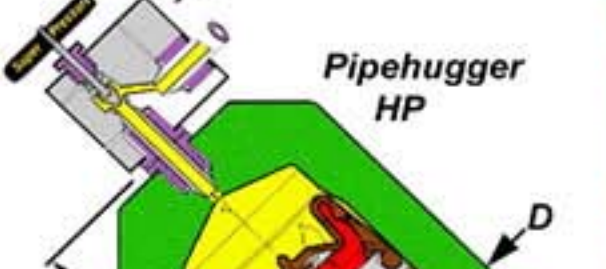
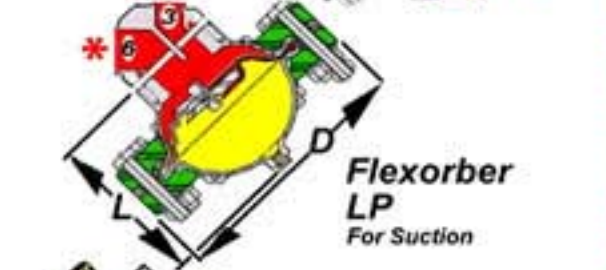
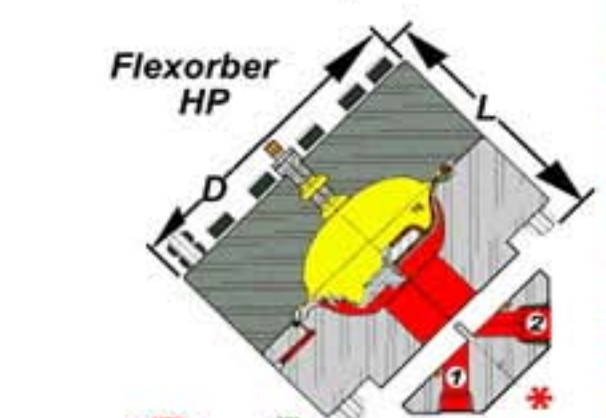
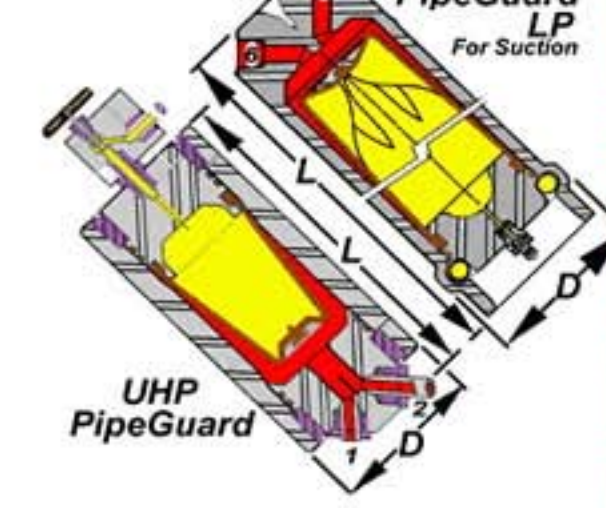
**3.** \*The question mark "?" = Letters, showing your choice of compatible elastomer, add the letter to ordering Pt. Nbr. - N=Buna N, E=EP, H=Hypalon, x V=Fluoro-Carbon, x x= addition to cost A20=Alloy 20, H22=Hasteloy 22, Ti2=Titanium 2, Tan=Tantalum, Zir Zirconium, DSS = Duplex Stainless, SDSS =Super Duplex.

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



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CAPACITANCE + DIRECTION CHANGE IMPEDANCE



\* For piping bases GOTO [http://www.pulseguard.com/pulsation\\_dampening/select\\_smooth\\_percentage/flow\\_or\\_pressure/find\\_pump\\_fcalc\\_damper\\_volume/method/pipe\\_method.htm](http://www.pulseguard.com/pulsation_dampening/select_smooth_percentage/flow_or_pressure/find_pump_fcalc_damper_volume/method/pipe_method.htm)

To make your own size selections, instead of using the preceding tables. please ask for "An Anatomy of Pulsation"; which is page 28 through 36.