

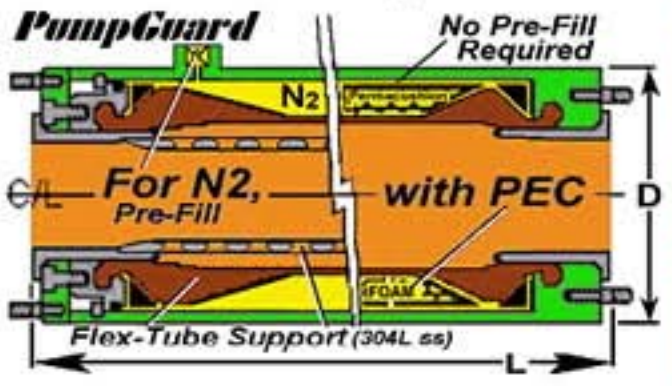


1 Dampers listed below are from 1000s of "off the shelf" inventory dampers, for preventing pipe systems from converting hose flow fluctuation into pressure pulsation. Prices are tabulated for you at www.pulseguard.com. Call toll free 1-888-DAMPERS(326-7377) for discounts etc. Choose a damper matching 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. | Connct Length Type L | Diam D | Weight In 316 Lbs. | Vol. Gls. | Pres. @ 93 C Lbs/in ² | 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 L | Diam D | Weight Lbs. | Vol. In ³ | Pres. Lbs/in ² | Wetted your choice Dims. For | Spares Kit FlexFlow | * |
|---|--|-----------------|--------|-------------|----------------------|---------------------------|------------------------------|---------------------|---|
| 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 L | Diam D | Weight Lbs. | Vol. In ³ | Pres. Lbs/in ² | 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 | ? | |

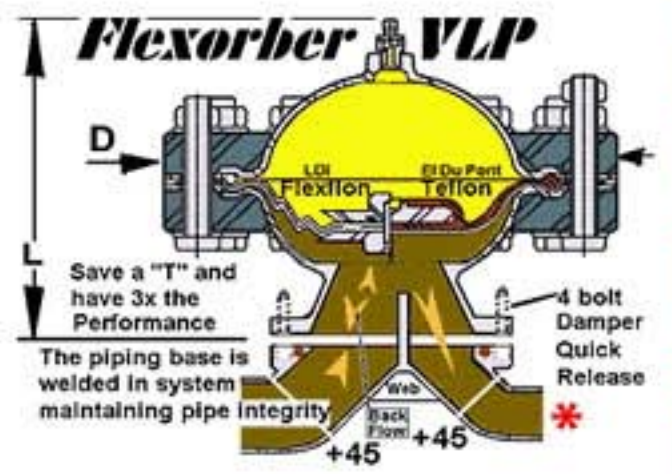
PipeGuard - Plas For flow fluctuation only. Pressure waves will by-pass Where plastics are absolutely specified, and there is no danger from fracture.

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

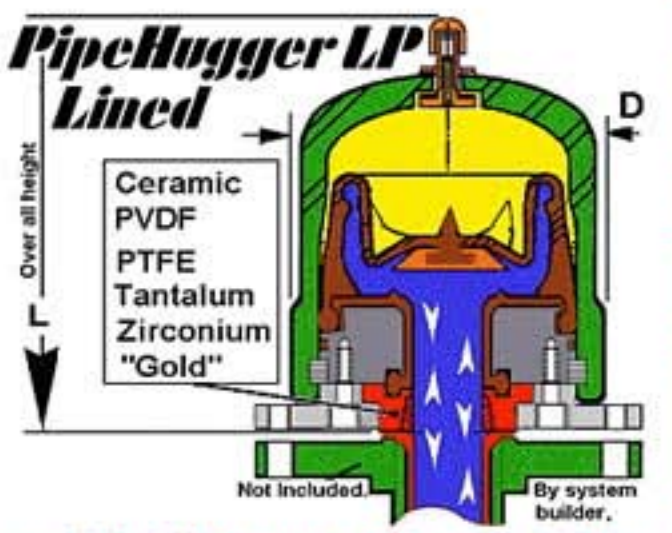
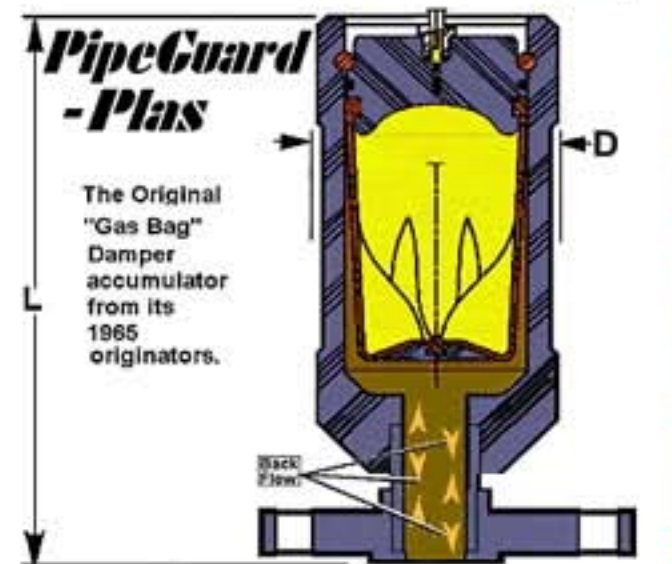
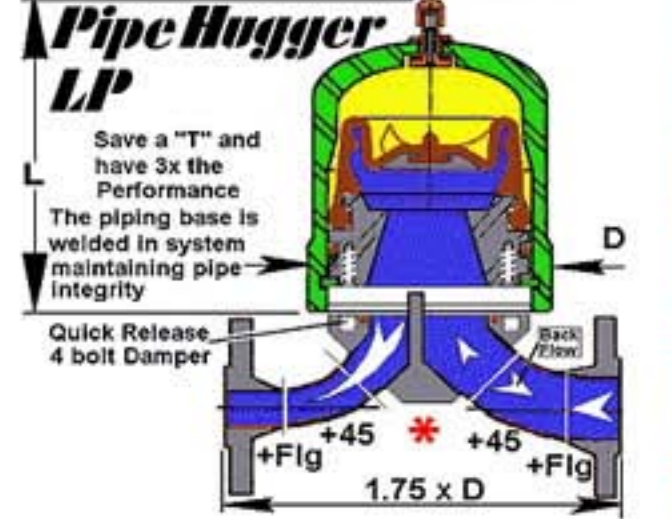
PipeHugger LP-Lnd Replaceable Elastomer Lining - Same Mtl. as bladder The low cost answer to special high cost materials for liquid compatibility. Or use for the safety of metal but plastic wetted.

| Please State Material preferences and model Number below when ORDERING: | Connection To Run of Your "T" | Length L | Diam D | Weight Lbs. | Vol. In ³ | Pres. Lbs/in ² | Wetted your choice | Spares Kit | * |
|---|-------------------------------|----------|--------|-------------|----------------------|---------------------------|------------------------|------------|---|
| Hos-Phr-Lnd-FF 90 | / Rf+PCD of 1"150#/ | 7.9 | 6.5 | 21 | / 90i | / 225p/ | Tan ? / Lnd + D145L | ? | |
| Hos-Phr-Lnd-FF 180 | / Rf+PCD of 2"150#/ | 10.0 | 8.5 | 38 | / 180i | / 225p/ | Zir ? / Lnd + D191L | ? | |
| Hos-Phr-Lnd-FF 360 | / Rf+PCD of 3"150#/ | 11.4 | 10.4 | 55 | / 360i | / 225p/ | Has276 ? / Lnd + 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



* For piping bases GO TO http://www.pulseguard.com/pulsation_dampening/select_smooth_percentagelength_flow_or_pressurefind_pump_fcalc_damper_volume/select_pipe_method/pipe_method.htm