

The COST \$\$ of HOSE TUBE PUMPS with Various PULSEGUARD Dampers



22 M3/Hr. (100 USGPM) heavy oxides slurry at only 1.5 meters / sec in a DN80mm line settles out and plugs the Damper / Accumulator. The need is for flow-through constant agitation & lower connection cost. 160 in3 pulse volume from diaphragm reversal & 1,000 in3 - 16Lt. Acc., only reduced spike 30%

3 pcs. CPVC Ts3" \$102
1x3"Flg + 3" NPT \$17
pipe coupling \$5
6 Hrs prime, bondfit-up &
Hydro \$430
4.3 USG PVC Acc \$1,136
Total \$1,680

2 Ts and a flange were saved by using a *accumulator safety block*, to which the damper face "O" seals and which provides for bracket mounting. The straight line from pump to damper guts gave pressure peak clipping. 2" pipe gave 3M/s. velocity The 720 in3, 4 connection damper does more than the 16 Liter Accumulator; but as the path is not through the damper, stable pressure was not evident.

1 pc. 3" socket T \$32
3.75 Hrs. fitting prep. &
Hydro \$269
11.8 Lt. Damper c/w pipe
base \$1,248
Total \$1,549

A (415 in3) 6.75 Liter (125 psi) 8.5 Bar 4 connection true flow through FLEXORBER LP damper, provides continuous agitation, in place flushability, saves all 3 T pieces and out performs an accumulator more than twice its size -

2.9 Hrs. Fitting prep. &
Hydro. \$208
6.7 Lt. Flexorber LP \$800
Total \$1,008

Fig. 3 b

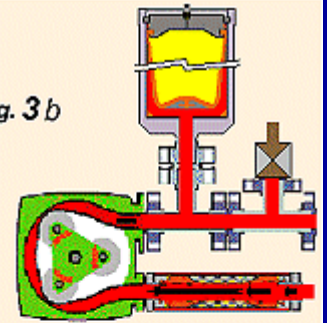
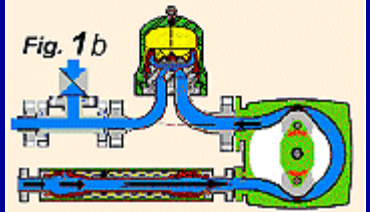


Fig. 2 b

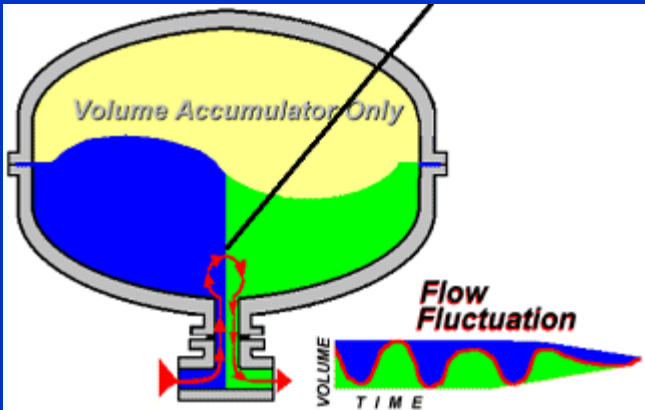


Fig. 1 b



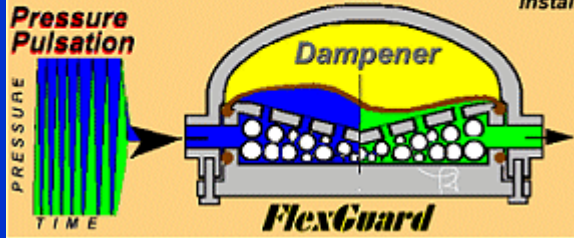
**Pressure travels 300 times faster than flow
So pulsation - flies straight past a "T"!**

Because flow is so slow, there is time to flow up, come to a stop, and flow back down a "T" on the other hand, whatever the residual pressure pulsation level is, it will fly straight past a "T".



Mass of liquid in a pipe is transferred at not above 180 inches/sec or say 460 cm/sec

A Pulsation Dampener intercepts pressure pulsation and smooths flow fluctuations; is smaller & costs less to instal.



Pressure in a fluid travels at, Mach 1 (in Air)
In harder substances (liquid) is transferred at up to 4000 MPH, or say 140,000 cm/sec.

CONCLUSION:- With 300% greater efficiency, because flow fluctuations & pressure pulsation are forced to see the inside of PULSEGUARD PULSE DAMPERS, are more compact vessels and DO MORE WORK FOR A LOWER COST. Hence the saying:-

Dampers that do, flow goes through, BUT pressure pulsation is caught