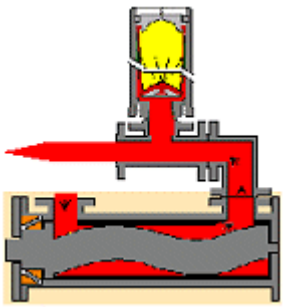
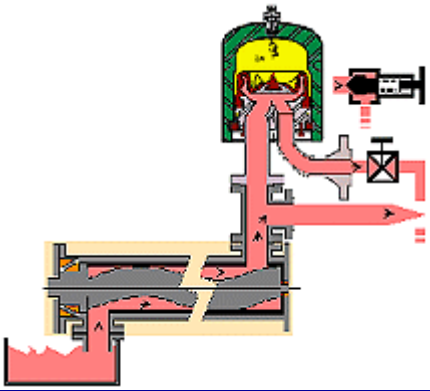
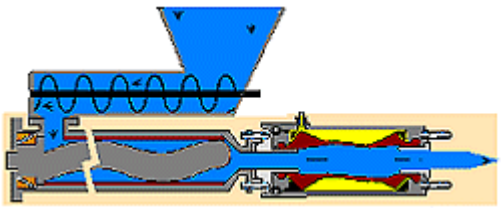
The COST $$ of PROGRESSIVE CAVITY PUMPS with Various PULSEGUARD Dampers

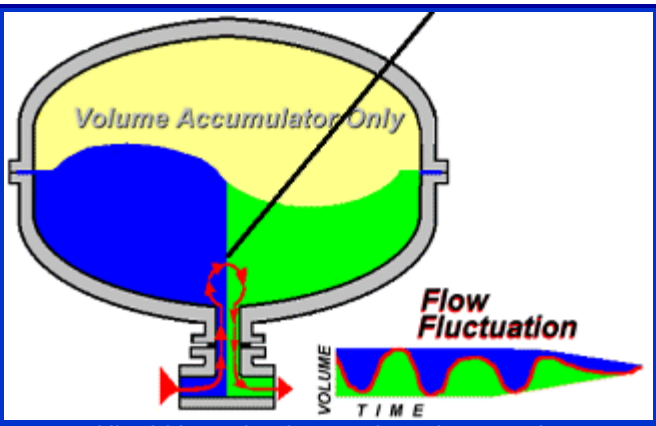
Removing pipe kicks from Progressive Cavity pump systems,

"Damping" method selection for most effective and least cost.

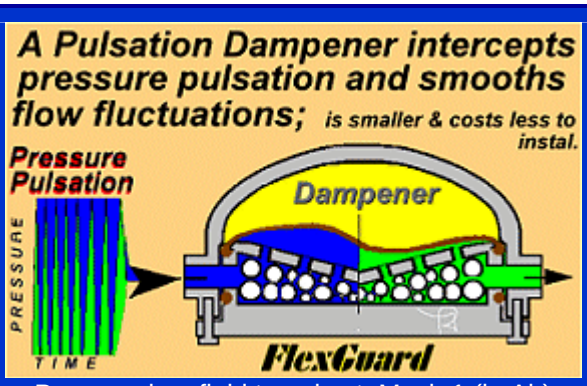
NOT GOOD Not good because the flow fluctuation that the system mass and friction turns into pressure pulsation will still leave pressure pulsation in the system, because of the pressure change necessary to reverse a highly viscous fluid up and down a single connection. Attempts to overcome this problem with humungus big hole dampers, are too expensive - (and not in place flushable either).	Monster Damper & Big 3 Flg. "T" 316L & 8" 150# 20 Gallon **3. $18,170**	
LESS EXPENSIVE ! BUT NOT GOOD Damper with inlet directly in line with the flow fluctuation is smaller and works better. Costs less because standard 2 hole off shelf inventory item, use of other connection for RV or vent save purchase of another "T" plus flanges.	PHr/TW/10G/6"x4" 316 L wetted. "U" @ 275psi **2. $9,440**	
AND THE ANSWER IS: Dampers with 3" through 12" connection; flushable, even "ram rodable" clear flow through path are a standard item in the PumpGuard range. For highly viscous materials, and experience up to gel with 1,000,000 cP viscosity, *PULSEGUARD* ensures performance at minimum cost, with the PumpGuard range.	ASME VIII "U" cert. 29,289 PuG/8G/275p no extra fittings **1. $6,751**	

The most dangerous blunder is to perceive viscous drag as acceleration head generation pressure.

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



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