BELOW: How to ensure lowest in place cost and most performance by standard installation methods.

P7

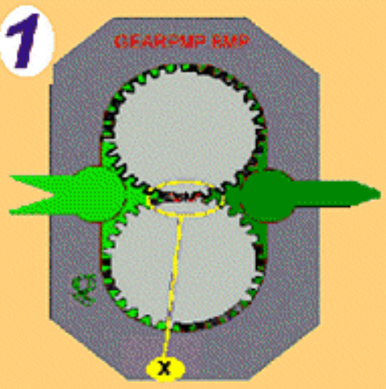
Removing the ripple from gear pump piping

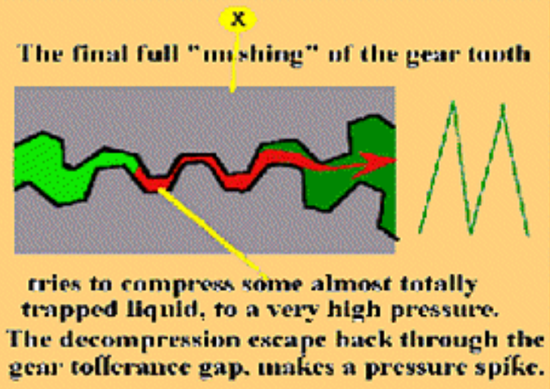
1 How it starts 2. A partial fix 3. True solution - with elastomers 4 With PTFE / or FLEXFLON 5 No particulate 6 With dirt 7 Big but best

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

Even these, THE SMOOTHEST of all POSITIVE DISPLACEMENT PUMPS have pressure disturbances, which are normally not important, but when they are connected to piping systems that were not designed, will cause pulsation.

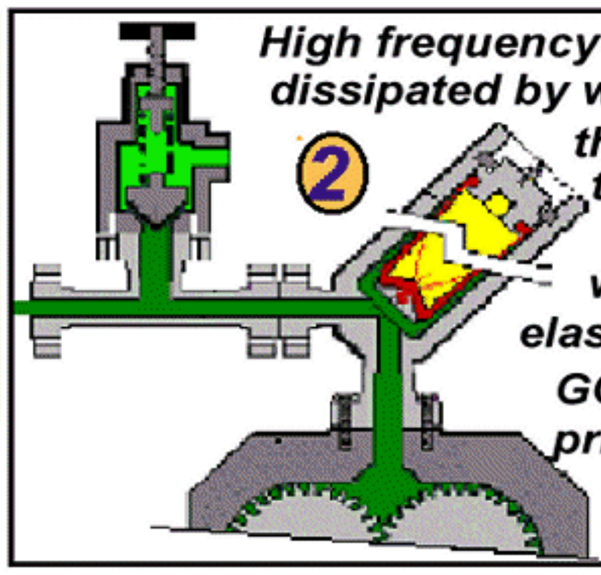
1





High frequency pressure pulsation is dissipated by wide ratio of hole size through which it enters to diameter of chamber.

2



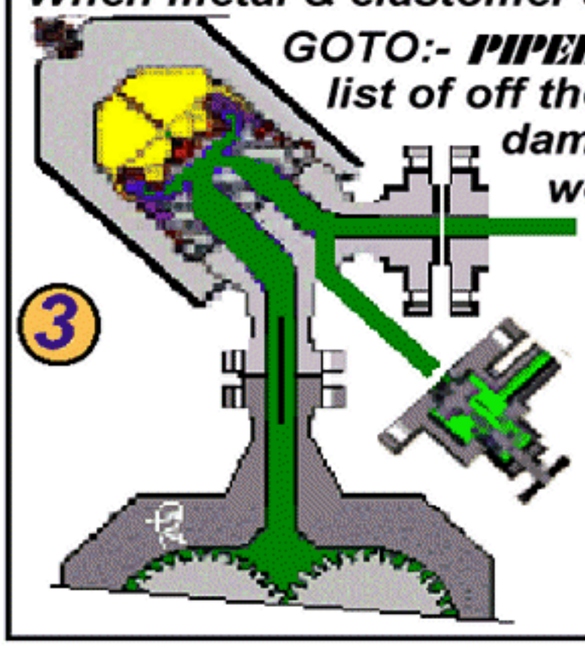
FOR A PARTIAL FIX when stainless and an elastomer are compatible

GOTO:- ***PIPEGUARD HP*** *price list of off the shelf inventory dampers, with dims. weights*

A better solution, larger diameter than (2) When metal & elastomer are compatible

GOTO:- ***PIPEHUGGER HP*** *price list of off the shelf inventory dampeners for dims. weights and drwg.*

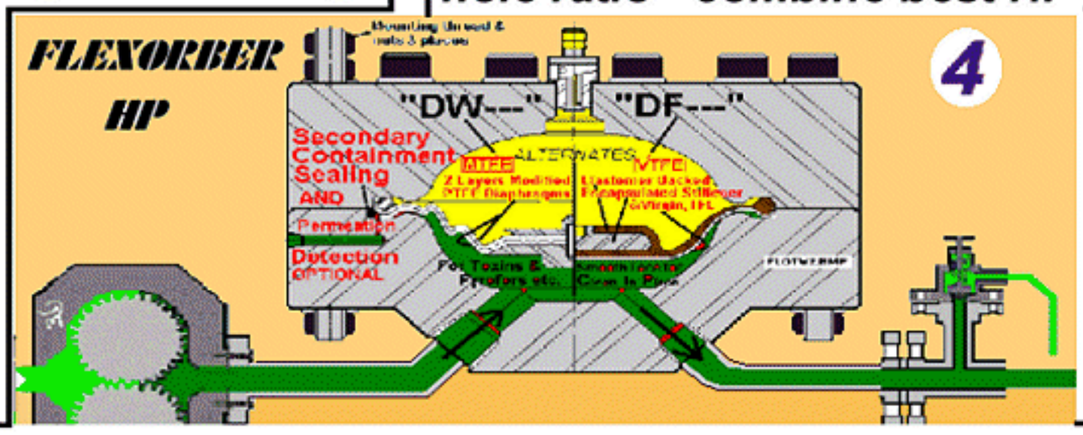
3



FLEXORBER HP *and* ***FLEXORBER LP*** *from hydro-formed dishings, with FLEXFLON or E.I.Du Pont Teflon have the largest chamber diameter to port hole ratio - combine best HF pulse interception with flow velocity smoothing.*

GOTO:- Flexorber price lists of off the shelf inventory pulse dampeners for dims. weights and cut sheet drawing.

4

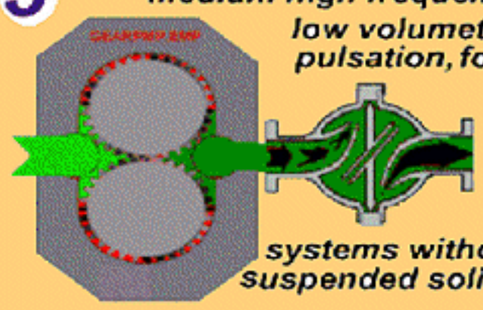


When you see a damper or a pump of particular interest, please request literature dedicated to that subject.

Dampers with no moving parts, & no foam to degrade or clog

5

The answer to, high pressure medium high frequency, low volumetric pulsation, for



systems without suspended solids.

WAG-HO

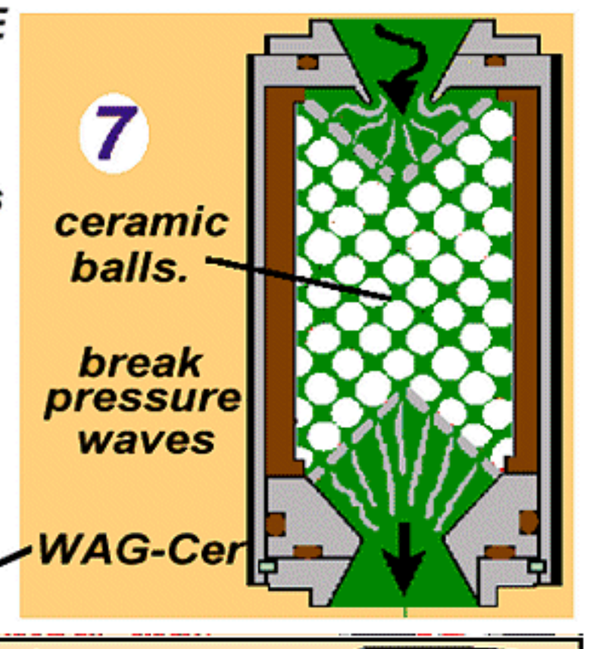
The ***WAVEGUARD H.O.*** *Multi Chamber*

By exploding pressure peaks through small holes into large chambers pulsation is destroyed

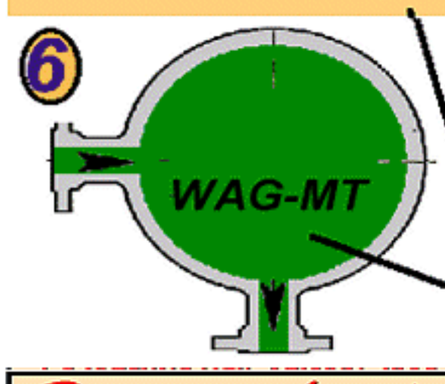
APPLICATION:-
Where miniscule fluctuations in flow velocity are of little concern, and you simply need to prevent pressure pulsation & resonance. then ***WAVEGUARDS*** *are THE answer.*

GOTO:- The price dimension & weights tables for drawings.

7



6



SELECTION is simply by connection, unless our associate LIQUID DYNAMICS International has completed an acoustic model study for you.
(5) WAVEGUARD HO , uses the Helmholtz Orifice technology for greater efficiency for size.
(6) Is for particulate laden systems, & is larger.
(7) Is for the ultimate acoustic performance.

Dampers that do. Flow goes through. BUT Pressure Pulsation does not.

Damper designs under licence from M Packer since 1983

PULSEGUARD® inc.

Guard against Pulsation

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Color fax is 10 times faster than email attach, and there are no viruses.