



"Peristaltic" and Tube or Hose Pump pipe systems react to Shoe lift-off flow reversal.



PIPE PROBLEMS ①②③ (below)

SUCTION Systems :

The pressure generation from flow reversal in the suction pipe, when the shoe or wheel hits the hose , depends on the length of the suction pipe.

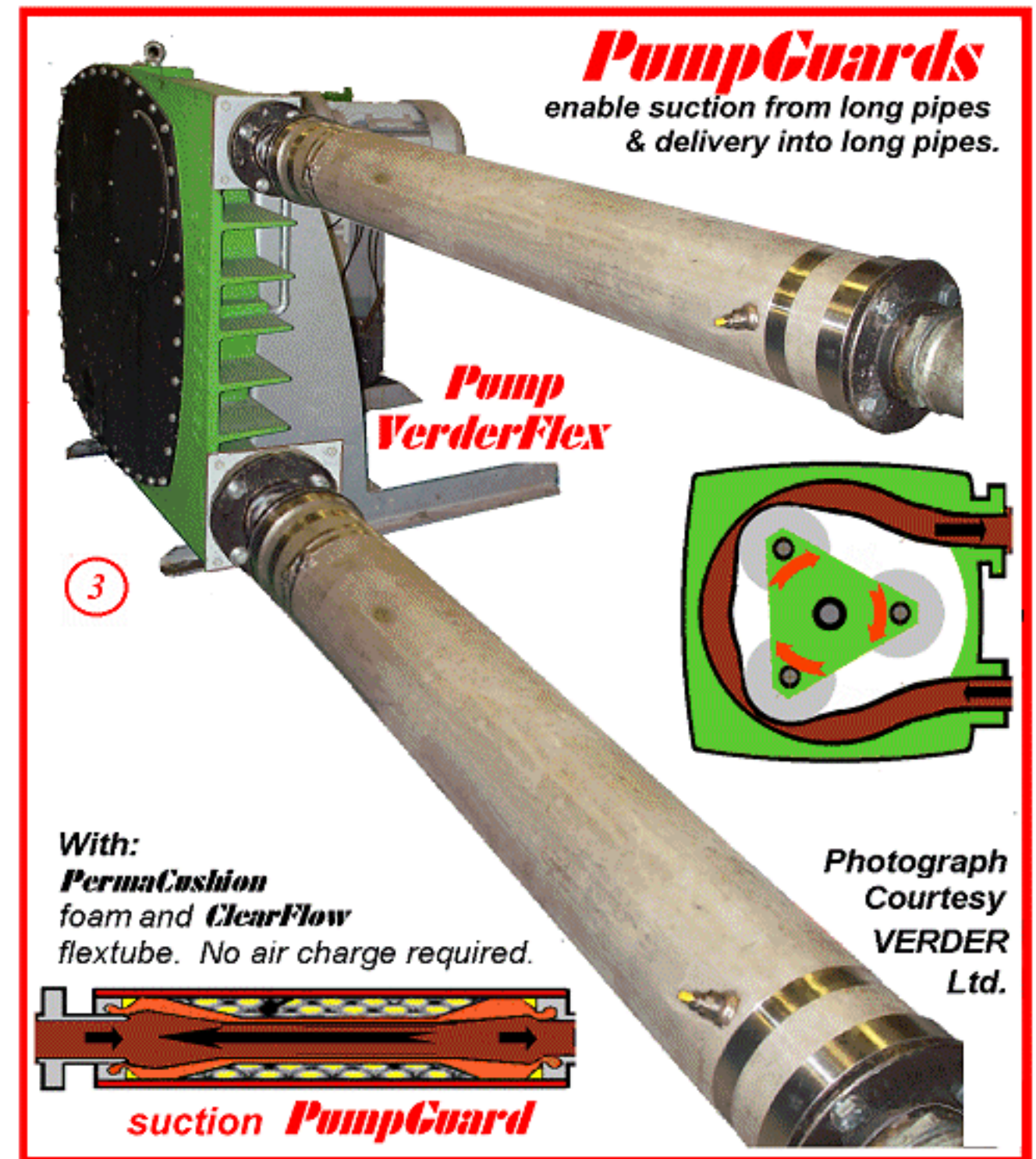
DISCHARGE Systems :

The pressure fall, and the height of the pulse that follows it, when the shoe or wheel lifts off, depends on the length of the discharge system .

Pulsation and hose pumps are system problems. No one can tell you how much pulsation has to be removed to enable your pump to work **unless :**

The pipe system details are estimated and stated.

TECH. Notes : It is not necessary to read the areas shaded in this color.
Peristaltic - from Greek "contractions and dilations (of a canal) moving a fluid"
The inside radius of the pipe, squared x 3.142, is its cross sectional area. Section Area x length is its volume, Volume x Specific Gravity is weight that has to change direction in "shoe squash" or "lift off" time. The viscosity of your liquid adds drag, and so do number & type of "Ls" & "Ts" you chose. No one can calculate how much pulsation you need to have removed, without pipe detail. Pumps can't pump unless systems are smooth enough.



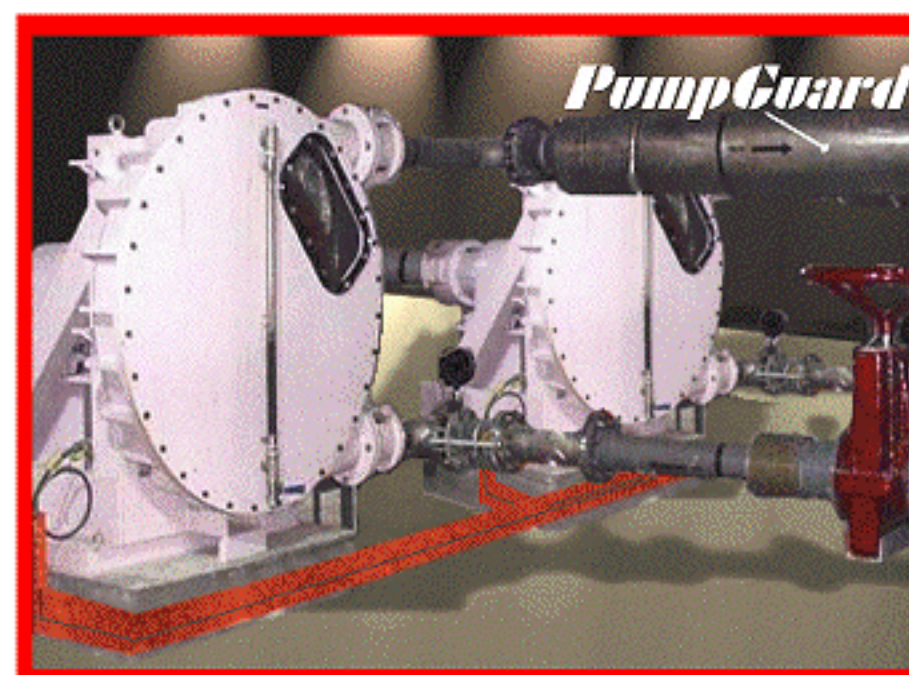
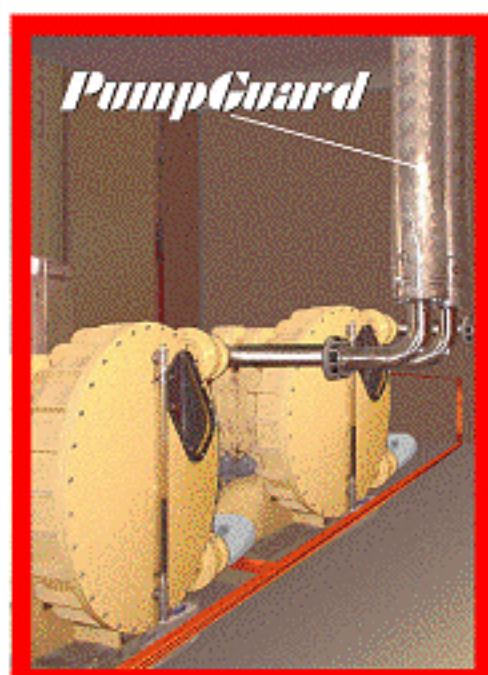
- ① Grit, Scum, Sewage, almost anything other than broken tail light lenses, wire, in 4" balls of rag & paper- may be pumped for miles, by the pumps below. Provided the pipe length , flow rate, r.p.m. are fixed, then suction PUMPGUARDS can be set for successful discharge use.
- ② Suction lines run up to 75 ft. / 23 meters, with huge pump priming and potential cavitation, problems that will cause even worse discharge pulsation.
- ③ A more normal application : 40ft. of 3" pipe in Yorkshire England - moderate potential pulsation .

ANSWER PUMPGUARD & ClearFlow FlexTube designed to allow 4" Diam./ 100mm balls of rags & paper impregnated with broken tail light lense & wire to pass into ENVIROTECH pumps
Foam prefill (no air) enables **PumpGuard** to continue working even after laceration of its **FlexTube** .

For details see *WORLD PUMPS June Edition 1998*

RESULTS ① No Sewers Overflow ② Pumps can fill. ③ Smooth systems last for ever !

Pipeline reaction, to pumping action, is also reduced by having 3 off set pumps on one shaft.



Dampers that do. Flow goes through. BUT Pressure Pulsation does not.
PULSE GUARD Inc.
Guard against Pulsation

In USA Toll Free, 1-888-DAMPERS (326-7377)
For the Americas --01(1)910-270-2737
BW & Color Fax, --01(1)910-270-0320
Color fax is 10 times faster than email attach, and there are no viruses.

