

# PUMPLETTER October 10, 2009

#### Need a fool proof pump?

The air operated diaphragm pump is the most forgiving pump in existence. It will automatically compensate when its discharge is restricted or shut completely off, its air supply is restricted or the liquid viscosity changes. If the pump materials are compatible with the liquid being pumped it is almost impossible to prematurely destroy it!

## **Pulsating Flow**

The diaphragm pumping principle naturally pulsates. This can cause difficulty when flow meters and instrumentation are present in your system. By increasing the number of pumping chambers in a particular model, manufacturers have been able to deliver a smoother liquid discharge. Consult with us if a smooth flow is important for your application.

#### Dry Running

If you need a dry running pump, you're starting in the right place. Air Operated Diaphragm pump designs can run dry indefinitely.

## Frequent Start/Stop:

An application having frequent Start/Stop, the true cost of operating an electric motor driven pump can be high because the motor has to overcome static friction.

# Pumping Rule of Thumb!!!

When selecting a pump a common problem we see is under sizing the pump. A good example of this would be selecting *nf* **25** for 180 LPM at 30'TDH. While the *nf* **25** is capable of this flow/TDH, it is not the pump that is recommended.

We recommend using a *nf 50* model. When running the *nf 25* at 180 LPM you are at 85% of its maximum speed. Working the pump this fast will cause premature wear and possible failure.

This is similar to running an automobile engine at 6000 RPM (redline). It can be done; however, you will get much longer life driving at 2000 - 2500 RPM.

If you divide a pump curve into three bands ideally the pump should run in the middle of the band. Doing this, you will get the maximum life and reliability out of your pump.

Neoflux does realize that running a pump in the middle of the curve may not always be possible but consequences of running to the far right of the performance curve is shortened diaphragm life, lowers the air pressure, slows the pump down and saves the diaphragm whenever possible.

