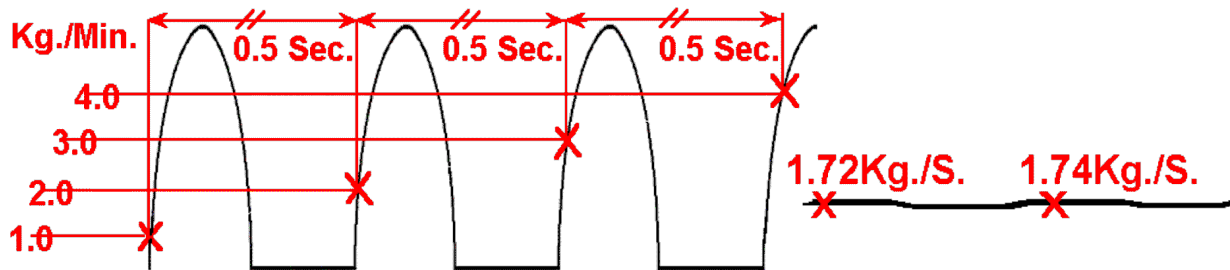


BEFORE FLOW SMOOTHING

AFTER FLOW SMOOTHING

MAKE SET FREQUENCY MAG. METERS USEABLE



KEEP FLOW FLUCTUATION LESS THAN 3%

A pulsed magnetic field flow meter, induces a magnetic field in a flow path. The rate of flow bends the magnetic field more or less according to how fast the flow is. The meter detects the extent to which the magnetic field has been distorted by the flow velocity. The amount of distortion is then displayed as a flow rate.

The magnetic field is produced at a fixed interval; it is “pulsed” across the flow. When a flow is fluctuating from a pump, if the interval at which the mag. field is applied is not exactly right, then the meter may give an erroneous reading.

In the example above, the mag. field is applied every 0.5 seconds.

The first reading coincides with a low flow condition.

The second reading coincides with a higher flow condition, the third reading coincides with a higher condition.

The meter reads 1.0 Kg/Sec. say 15us gpm, then 2.0 Kg/Sec 30 us gpm, and 3.0 Kg/Sec 45us gpm and then 4.0 Kg/Sec say 60us gpm respectively.

In fact the pump is producing 1.73 Kg/Sec.

When the flow is stabilized, the meter will read 1.73 Kg /Sec say 25 us gpm (The exact relationship between mass and volumetric flow, will of course depend on the specific gravity.)

The extent to which, flow should be stabilized to make these meters able to give you a useful reading, can generally be, to produce smoothness to within a 3% residual flow fluctuation (+&- 1.5%) of theoretical steady state flow.

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