NATIONAL ENERGY
TECHNOLOGIES
FACILITY CONSERVATION SPECIALISTS

Water Flow Management

National Energy Technologies represents several technologies that will reduce utilities with the use of emerging technologies founded on advanced scientific principals. We endorse this equipment due to our diligent research, client testimonials and years of field testing evidential data.

Our Turbulence Reduction System uses a reverse flow pulse to compress any air that is entrapped in your water system. This propitiatory process will have a positive effect on stabilizing the flow entering your facilities water circuit.

- ***This device is capable of reducing the meter spin by 5 to 15%***
- ***Reduce sewer expense (often taken from the incoming meter)***
- ***It will act as a "Shock Absorber" for incoming spikes of entrapped air caused by ruptures in the municipal system***
- ***It moderates current or seasonal High Water Pressure Conditions***
- ***With any reverse in flow the device also acts as a secondary backflow device***

This technology uses the flow of water to self-perpetuate our proprietary oscillation assembly, without effecting pressure. The oscillation assembly will create a compression process that generates a backward thrust. The result is that air in water transforms into compacted state. The continuation of this process will alter the air to a maximum compression state. This super compressed air, then resumes travel through the water meter, along with clean flow water, and past our device. After the compressed air has traveled past our device the air will resume its original state of volume.

Engineering Description

The design of our valve will influence the flow dynamics by breaking up the flow into smaller jets which change the velocity profile from slightly parabolic (flow faster in the center) to a flat-faced velocity profile where the center flow velocity is slower and the wall velocity faster than normal.

This technology will also reduce the perpendicular (swirl) velocity vector in the pipe. When fluid travels through a pipe there are two velocity components. The first velocity is the forward linear motion through the pipe. The second component is perpendicular (sideways) to the first velocity. Generally water will flow more quickly in the center of the pipe and slower at the pipe walls. Our device modifies the flow into a flat-faced velocity profile where the center flow velocity is slower and the wall velocity faster than normal. The 'swirl' velocity component that you see when you flush a toilet is unproductive in the line pre meter and will be greatly reduced with our equipment. It is the combination of implementing and manipulating these dynamic flow principles that result into our custom turbulence management device that offers a multitude of benefits.

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