THE FILTRATION

Filtration is very simple. Place a screen or a membrane in the path of the water with openings sufficiently small to collect dirt particles, and you have a filter.

All filters do that with varying degrees of success, and the cleaning of the screen is thought of as a simple matter of reversing the flow through the pipe.

Experience tells us that this method worked for stopping the solid particles. However, drawbacks do exist. Solids build-up (caking) occurs very quickly. Pressure drop across the screen is high. Cleaning of the screen can be ineffective and required large amounts of wasted water for backwashing. Backwash interrupts the main flow. Manual cleaning of the screen is often required.

The need for a better way of cleaning the screen was recognized. Automatic Filters, Inc. introduced a dirt removal system that outperforms all existing backwashing techniques. Tekleen filters force water to backwash in a concentrated spot. The self-cleaning filters work on water line pressure alone without external power.

The above drawing shows a filter with an additional pipe and a valve. When the valve is opened to the atmosphere, water flows out of the pipe. Since the end of the pipe is in a close proximity to the screen, part of the water entering the pipe will come from the opposite (clean) side of the screen. High water velocity or point suction washes the dirt off the screen without interrupting the main flow. Furthermore, the whole screen will be cleaned by moving the pipe over the entire screen area. In fact, Tekleen’s dirt collector spins and cleans using water line pressure alone.