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Our SCF (self cleaning filter) series is designed for applications where cleaning a media filter or filter bag system is not practical. For example;

Unattended Car Wash Locations

High Volume Flow Demand

Limited Underground Storage Tanking

Locations That Require Uninterrupted Flow

The SCF Series systems are low maintenance systems. A simple check of the strainer basket is the usual maintenance task that is involved with this system. This systems check requires about 5-10 minutes per day.

Con-Serv Water Recovery Systems offers **on demand** water for the washing equipment. In other words, when your wash needs water for the washing process, the system will supply water to the washing equipment. When the wash is closed or there are no cars in the wash, The Con-Serv unit will purge itself and shut down until water is needed for the wash process. The primary filtration system consists of a high volume process pump with an associated filtration array designed for maximum water quality while providing high volumes of wash water to be reused in the vehicle washing process.

The system is designed to receive wastewater collected from the underground holding tank system and to process this water to remove all particulate matters greater than 25 micron. 25 microns are equal to .001 inches. This is the size of a single white blood cell. In addition, the filtration system is designed to remove oils, road film, and waxes which can cause deterioration in overall water quality.

The ozone/ odor control re-circulation system is operated independently of the primary filtration system (excluding Series I) on a continuous basis to treat all the water held in the system storage tanks. The system utilizes a patented injector system, which provides a 99 % transfer rate of ozone to the stored water. This powerful re-circulation system de-emulsifies waxes and removes dyes from solution so they may easily be captured by the micro pore filtration system described above. The ozone acts as an oxidizing agent to kill bacteria and algae by limiting organic buildup, which are commonly

associated with the odors found in reclaimed water. After the water has been treated by these two synergistic systems, the water will be ready to use in the washing process again.

Since our system utilizes ozone in the filtration process, let me explain what ozone is and why it is useful for this application. Ozone is oxygen that has been activated to accept one more oxygen atom. The result being O₃. Ozone is an inherently unstable molecule and will react with a great variety of materials to return to its more stable state of O₂. In fact if the ozone molecule does not react with any material it will naturally decay approximately twenty minutes after generation. This reaction with other materials is known as oxidation. Oxidation is what makes ozone a very attractive waste water purifier. Ozone will attach itself to and destroy viruses, bacteria, and other pollutants up to 3,000 times faster than chlorine while leaving no residuals in the water. It works more effectively and efficiently than other methods because it attacks bacterial cell walls, causing instant cell destruction. Ozone will react with hydrogen sulfides (the chemicals that cause odor in water) and alleviate the odor. In most reactions, noticeable clarification of cloudy or discolored water will occur. Unlike chlorine, ozone leaves no residual or chemical byproducts in the water. Ozone is the most powerful and safe biocide known today that can be employed to help purify waste water for vehicle wash systems.

Con-Serv also offers a bio-dosing system that utilizes a special blend of bacteria designed especially for the vehicle washing industry. – The strains of bacteria present are among nature's most powerful and useful degraders. Scientists have selected these strains for their exceptional abilities to oxidize a wide range of stubborn organics and priority pollutants.

The exceptional point-of-use viability assures the addition of billions of bacteria at the peak of their activity cycle, and with very versatile and sophisticated appetites. They provide enhanced removal efficiency of common wastewater organics. This increased efficiency not only allows higher organic loading, but also reduces effluent discharge of BOD and TSS.

The excellent fat and oil oxidizing capabilities reduce operational difficulties due to build-up. The sludge-settling and dewatering characteristics will be improved, and effluent discharge levels will be reduced. It has also demonstrated effectiveness in reducing fat and protein accumulation in lift stations and grease traps.

Many regulatory agencies are adapting toxicity tests of wastewater discharges using fish and other aquatic life forms as the test animals. Bio-Zone degrades many toxic organics

commonly found in industrial effluent streams, thereby reducing the impact on the aquatic species used in these toxicity tests.

A program of regularly scheduled treatments will establish high numbers of hardy and versatile bacteria which will diminish the effects of shock upsets, as well as provide quick recovery to acceptable operation parameters.

Bio-Zone bacteria will out-compete and replace common odor producing microbes, thereby reducing or eliminating overall odor production.

The Con-Serv water recovery system has some distinct advantages over other systems in the industry, which make it stand alone in the car wash water recovery arena. Firstly, the self cleaning filter is rated at 25 micron absolute. This means that any particulate 25 micron or greater will be filtered from the water and returned to the underground holding tanks. Some companies advertise a lower micron rating, but it is a nominal rating. Nominal ratings are inexact and can be misleading to the end user. A nominal rating of 25 microns or less will not give one the assurance that he is actually getting a filtration factor 25 micron absolute as you are guaranteed with the Con-Serv system. Secondly, the Con-Serv system uses a unique stainless steel filter to achieve maximum filtration of the wash water. When dealing with other styles of filtration, density of the particulate plays a major factor in their removal. With the Con-Serv model this is a non factor due to the fact that all particles will be caught on the stainless steel filter and purged back to the holding tank. Next, some media filters must be cleansed with fresh water after use. In some cases the amount of fresh water needed to restore these filters can outweigh the water saved by using a system such as this. The Con-Serv system utilizes the water from the holding tank to purge itself, thereby creating no need for the introduction of fresh water into the system for purging purposes. Con-Serv has also conducted tests with a major car wash pump manufacturer to provide evidence that reclaimed water from the self cleaning filter systems will not harm these sensitive pumps. The self cleaning filter system is an **on demand** system that will provide water only when the car wash equipment calls for it. This reduces the utility bill of the end user by cutting down on the electrical cost to operate the system. Only the small secondary pumping system operates continuously. This system running 24 hours a day will use the same electricity as a 100 watt bulb left on constantly. The holding tank set up requires only three 1500 gallon reservoirs, which is minimal compared to other's requirements. Con-Serv systems are also compact in size requiring a 34" x 44" space for placement in the equipment room.

These benefits along with the secondary ozonation or biological dosing process are what separate Con-Serv Water Recovery systems from the rest of the field.