

EnviroGuard

EnviroGuard™ is a closed-loop filtration system designed to work with your ultrasonic stencil cleaner by continuously filtering the rinse water which is critical since it will ultimately determine if residue is left on the cleaned stencil. The EnviroGuard can also be used to batch treat the wash water, thereby prolonging bath life.

In a typical application, the user will set the rinse resistivity monitor for a water rinse quality of (1) MOHM. Once the monitor reaches the set point the resistivity monitor will sound an alarm. This indicates that the carbon and resin filters no longer have the capacity to produce water quality higher than (1) MOHM.

However, the carbon filter still has considerable filtration capacity remaining, just not enough to produce high quality water. The "spent" rinse carbon filter can then be used to batch filter the wash water.

EnviroGuard™ is available with all Smart Sonic Stencil Cleaners



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100% Closed-loop Filtration (ECF) Systems

Description:

Because of the unique properties of Smart Sonic's 440-R® SMT Detergent, the ECF Systems can be designed to meet the specific purity, flow rate, and throughput requirements of the Smart Sonic Ultrasonic Stencil Cleaning Process. ECF Systems are designed for use only when using 440-R SMT Detergent as the chemical additive for cleaning non water washable solder paste or for systems using DI water without chemical additives for cleaning water washable solder paste and water washable flux residues. The ECF System may not perform to specification if other chemical additives are utilized. To meet purity requirements, system designs combine various advanced water treatment technologies with state-of-the-art materials of construction. System designs can vary depending on specific requirements. Generally, the Smart Sonic ECF System will consist of a unique two-stage mixed bed ion exchange with its required pretreatment of activated carbon, micron filtration and gravity filtration. An ultraviolet (UV) light system is utilized to prevent long term microbe contamination. The ECF resin filter operating life can be increased using deionized (DI) or reverse osmosis (RO) water to initially charge the system and as make-up water to compensate for evaporation and "drag-out".

Particulate Pretreatment Stage - Collects large particulates such as solder paste to extend the useful life of the micron filter.

Adsorption Pretreatment Stage - Removes of a broad spectrum of organic contamination. This is a separate filtration tank and is designed to be regenerated when ever the primary DI filter requires a maintenance exchange.

Primary Treatment Stage - A proprietary DI media "neutralizes" the wastewater by removing free ion molecules created by the solder paste and 440-R SMT Detergent. A resistivity monitor with an alarm set point of the desired megohm purity is placed in-line between the primary deionizer and polishing deionizer. This provides a convenient quality control device to indicate exhaustion of the primary deionizer. The ion-exchange resins are regenerated by Smart Sonic using a proprietary process.

Polishing / Security Treatment Stage - An identical DI media tank is placed in-line after the resistivity monitor. This DI tank provides final "polishing" of the water and serves as a back-up to the primary DI filter assuring the operator of high quality DI rinse water at all times. When the resistivity monitor alarm of the Primary DI filter is sounded, the primary DI filter is taken offline and the polishing DI filter is moved to the primary position. This allows for a fresh DI filter to always serve as a polishing treatment and provide the security of high quality DI rinse water. A resistivity cell light is placed in-line after the polishing DI filter to provide a convenient quality control device to indicate a minimum final water quality. The polished water then enters a UV light system to prevent long term microbe growth.

Filter Regeneration – The 8" x 24" Adsorption Pretreatment and Primary Treatment filters are returned to Smart Sonic's regeneration facility using the provided preaddressed shipping containers. In house turn around of regenerated filters is typically 48 hours. All tanks are labeled and serialized so customers will receive their own tanks back without concern of outside contamination. Operating life of the filters under normal operating conditions (20 cleaning cycles per day) is typically 1 – 3 months depending on the size and design stencils, rinse cycle time and amount of contamination presented to the system. Removal of excess solder paste from stencils will extend the operating filter life. Precleaning of stencils using chemical wipes, alcohol, etc. is NOT recommended.

The EnviroGuard-STD is designed for use with the 1500 & 2003 Series Stencil Cleaners. The EnviroGuard-P is for the 500 Series and the EnviroGuard-PR is for the automatic Model 6000 and ErgoSonic Stencil Cleaners.

EnviroGuard-STD and P Models -

for use with stencil cleaners Models 1550 & 2003

Overall Dimensions: 36" x 24" x 37" H

Carbon & Resin Tanks: 8" vx 24" with easy disconnects

115 Volt, 2 Amps

EnviroGuard-PR

for use with stencil cleaners Models 6000 & ErgoSonic

Overall Dimensions: 46" x 40" x 47" H

Carbon & Resin Tanks: 8" vx 24" with easy disconnects

230 Volt, 1 Phase, 6 Amps