



Zenith Ultrasonics

Waves at Work

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SSS-960 Ultrasonic Strip Washing System

For cleaning continuous lengths of strip materials

For applications which require the cleaning of continuous lengths of stamped strip materials, such as progressive die stamping operations, Zenith Manufacturing introduces the SSS-960 Ultrasonic Strip Material Cleaning System. Designed specifically for the cleaning of such products, the SSS-960 removes all stamping lubricants and/or coolants, producing an absolute zero-residue cleaning result which can not be matched by spray cleaning systems of any kind when deionized water is used in the rinsing chamber.



In the past, manufacturers of stamped metal materials relied on spray washing systems to remove the contaminants typically found in such operations. However, spray washers designed for this purpose were not capable of consistently producing zero-residue results, or would damage sensitive stamping designs, especially on today's complicated and intricate materials, which may trap contaminants and oils. In addition, spray washers require significantly more maintenance and large amounts of water is lost by evaporation.

To address the shortcomings of the spray washing process, Zenith utilized the same technology used in its high-speed Wire Washing Equipment to produce a stripwasher sure to represent the standard for such applications. By incorporating our patented CROSSFIRE Multiple Frequency Ultrasonic System in both cleaning and rinsing cycles (pat #5,865,199 and 6,019,852), the SSS-960 removes contamination down to the very pores of the material itself, removing all contamination down to .1 microns in size, performance that spray washers are not capable of producing. The ultrasonic action has the capability to clean inside of complex stamping areas and folds which typically trap contamination, leaving an absolute zero-residue cleaning result.

The SSS-960 is positioned at the exit side of the stamping equipment. Strip is fed through the system, and is connected to the optional Strip Drive System, which perfectly matches the speed of the stamping equipment fully automatically. As strip exits the stamping equipment, it is gently and automatically pulled into the SSS-960 system.

The strip first enters the Ultrasonic Cleaning Reactor, where it is bombarded with dual-frequency ultrasonic cavitation which gently scrubs the surface clean. The





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included adjustable Spray Assemblies simultaneously sprays the strip with heated detergent to enhance the cleaning operation. Spray assemblies are all pressure adjustable, and can be used on the most sensitive strip material.

After exiting the ultrasonic cleaning reactor, compressed air knives gently remove over 90% of the detergent from the strip to prevent the detergent from entering the rinsewater. This allows the optional deionization resins, used to keep the rinsewater pure, to last significantly longer.

The strip then enters the Ultrasonic Rinse Reactor, where all remaining detergents are removed ultrasonically as well. User-adjustable spray assemblies are included to enhance the rinsing action.

After exiting the rinse reactor, the excess water is removed with compressed air knives before the strip enters the Drying Chamber. The Drying Chamber includes a custom-manufactured Compressed Air Strip Wipe to remove all water residue from the material. The strip exits the SSS-960 cleaned, rinsed, and dried to a zero-residue, medical-quality finish.

The SSS-960 includes all of the equipment necessary to support the strip cleaning operation, and several options can be added to enhance the operation. Heating systems are included to keep cleaning and rinsing fluids at required temperatures, and are controlled with digital temperature controllers. A Filter system is included to extend the lifespan of cleaning agents.

Optional Deionization systems mounted to the SSS-960 frame are equipped with Ultraviolet Water Purifiers to prevent the production of septic odors, and water quality indicator to alert operators when resins require replacement. A optional 5-light Signal Tower keeps operators notified on system conditions. Optional Automatic Fresh Water Make-up Systems automatically replace water lost by evaporation. And, all metal wetted components are manufactured of 316L low-carbon stainless steel for superior corrosion resistance.

If you have the need for an in-line strip cleaning system, contact Zenith Ultrasonics to purchase the most advanced strip cleaning system available today.

