



## Sawa Ultrasonic Stencil Cleaners – Description

The Sawa Ultrasonic Stencil Cleaners, models SC-5000GE and SC-500GE, are fast and effective solutions for cleaning apertures on fine-pitch stencils. The Sawa Cleaners stand out from other ultrasonic stencil cleaners for a number of reasons:

- 1) **Sawa Cleaners use direct contact ultrasonic energy to dislodge solder spheres from fine-pitch apertures.** Other ultrasonic cleaners are the bath-type in which stencils are submerged into a solvent wash. The ultrasonic waves are greatly diffused in the wash and have some difficulty completely removing solder paste from small apertures such as those for BGAs. Other washers try to make up for this deficit by heating the solvent or increasing the soak time of the stencil. This can lead to delamination of the mesh from the stencil as well as increase tact time. With the Sawa Cleaners, the transducers make contact onto the surface of the stencil through a light coating of solvent therefore infusing powerful ultrasonic energy directly to apertures and quickly dislodging solder spheres from the edges of the stencil. The paste is then wicked into a sponge soaked with some solvent underneath. (Please see cleaning procedures as attached for more detail.)
- 2) **Sawa Cleaners are hand-held, portable units that can be used in-line on the printer without removing the stencil.** Other cleaners are bulky and can only be used offline in one position due to plumbing, waste disposal and other concerns. The Sawa Cleaner is small, portable and can be fixed on to the printer itself or right next to it. During the printing process, if it has been determined by the engineer that the apertures of the stencil are becoming clogged, the machine can be temporarily stopped, the solder paste moved to the back of the stencil and in-line cleaning with the Sawa cleaner can be accomplished in a matter of one minute or two. The tact time for stencil cleaning is thus reduced while at the same time greatly improving printability during production.
- 3) **Sawa Cleaners are quick, effective, versatile and environmentally safe.** Unlike many other types of stencil cleaners, any type of cleaning solvent can be used with the Sawa Cleaners. Water, non-voc solvents or regular IPA, etc. may be utilized effectively with Sawa depending upon what type of **solder paste or adhesive** is used. Other ultrasonic cleaners typically take anywhere from 10 to 20 minutes to complete a cleaning cycle. For Sawa, the time is reduced to 1-2 minutes including drying. Because very little solvent is required with the Sawa Cleaner, there are no liquid waste disposal or solder catcher concerns.
- 4) **Sawa Cleaners are economical.** The price of the Sawa Cleaners runs thousands of dollars less than the bath-type ultrasonic stencil cleaners. In addition, the customer will save in running costs due to low solvent usage. The Sawa Cleaner does not require plumbing, liquid waste disposal or special permits for installation.

The Sawa Cleaners are unique products that are innovative, economical and effective for fine-pitch stencil cleaning.