With normal cloth wipe cleaning of stencils, solder paste residue is left behind causing quality problems especially in fine pitch applications. Small amounts of solder balls have a tendency to adhere to the edges of apertures. Sawa Stencil Cleaners remove all solder paste residue utilizing ultrasonic vibration.

**SAWA SC-1000HE**

- **Usage**
  1. Stencil Cleaning
  2. Probe-Pin Cleaning
  3. Solder Softening
  4. Nozzle Cleaning

- **Benefits**
  - Can be used for stencil cleaning, probe-pin cleaning, solder cleaning, and nozzle cleaning
  - Improve assembly defect
  - Reduce solvent usage
  - Lower initial investment
  - Portable size

**SAWA SC-145GAE**

- **Usage**
  1. Stencil Cleaning
  2. Probe-Pin Cleaning
  3. Solder Softening
  4. Nozzle Cleaning

- **Benefits**
  - Squeegees, scrapers, and test printed PC boards may be cleaned in the tank
  - Most of solvents can be used for cleaning.
  - Easy automatic operation with a timer
  - Can be connected with a metal stencil cleaner

**Sawa Cleaners** use direct contact ultrasonic energy to dislodge solder spheres from fine-pitch apertures.

**Sawa Cleaners** are hand-held, portable units that can be used in-line on the printer without removing the stencil.

**Sawa Cleaners** are quick, effective, versatile and environmentally safe.

**Sawa Cleaners** are economical.
SAWA SC-500GUS

The Sawa 500GUS removes solder balls from stencil apertures after normal wipe cleaning. A powerful hand held ultrasonic cleaning head (W4.61 x D4.61 x H3.94 in) is manually applied over apertures with IPA, water, or a non-VOC solvent. During application of the cleaning head, the stencil is laid on a foam pad soaked with solvent contained within a large tray. The foam is utilized to capture solder balls dislodged by the cleaning head.

- Applies ultrasonic vibration directly to the stencil providing powerful cleaning capability.
- Cleans apertures as effectively as fully automatic stencil cleaners that can cost three times as much.
- Stencils can be cleaned in just a few minutes.

Stencil Cleaning Evaluation

**SAWA SC-500HE**

The Sawa 500HE removes solder balls from stencil apertures after normal wipe cleaning. A small hand held ultrasonic cleaning head (1.89 in diameter) is manually applied over apertures with IPA, water or a non-VOC solvent. During application of the cleaning head, a small tray containing a foam pad soaked with solvent is held underneath the stencil to capture solder balls dislodged by the cleaning head.

- Can clean stencils without removing them from the printing machine.
- Stencils can be cleaned in just a few minutes.
- Portable

**SAWA SC-139GAE**

For most SMT lines, IC testers are used to uncover product defects. However, the precision of IC testers can be greatly affected by the cleanliness of the pins. SAWA CLEAN SC-139GAE is uniquely designed for accessible and complete cleaning of ICT fixtures and may also be used for squeegees, scrapers and misprinted PCBs.

- Fast and Effective ICT Pin Cleaner
- No need to remove pins from ICT fixture
- Cleans all pins at one time in five minutes
- Eliminates flux residue on ICT fixture
- Enhances accuracy of IC Tester
- Capable of cleaning squeegees, scrapers and misprinted PCBs.

**Sawa Application Merits**

Ease of Operation & Time and Labor Saving

<table>
<thead>
<tr>
<th>METHOD</th>
<th>TIME</th>
<th>OPERATION</th>
<th>NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sawa Clean</td>
<td>15 Seconds</td>
<td>Use Sawa cleaner with solvent to clean stencil.</td>
<td>Powerful ultrasonic energy making direct contact to the stencil dislodges solder spheres from the apertures quickly.</td>
</tr>
<tr>
<td>Hand Wiping</td>
<td>4 Minutes</td>
<td>Manually clean stencil with cloth and solvent.</td>
<td>Cleaning time may vary depending on the size of stencil and other factors.</td>
</tr>
</tbody>
</table>

**Benefits**

- Sawa Cleaner VS. Manual Wiping Method
  Evaluated Sawa Ultrasonic Stencil Cleaner - Cleaning Results
  Provided By: Customer Manufacturing Telecommunications Equipment

<table>
<thead>
<tr>
<th>Before SAWA cleaning</th>
<th>After cleaning by SAWA clean</th>
</tr>
</thead>
<tbody>
<tr>
<td>QFP: 0.4 mm pitch Aperture</td>
<td>Assembly Board Aperture</td>
</tr>
</tbody>
</table>

  **Conclusion:** SAWA CLEAN achieves a conspicuously better cleaning effect comparing to hand wiping. *Image for reference only