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# KRISTEEL - Shinwa®

AN ISO 9001 : 2015 COMPANY

- ★ MUMBAI UNIT
- ★ BANGLORE UNIT
- ★ SILVASSA UNIT

# SMT STENCIL

FULL SERVICE STENCIL SUPPLIER



With Over 20 Years of Experience in Stencil Technology.

With A Technical Collaboraton with M.E.T. of USA.

*Decades of Engineering Excellence*

[www.kristeel.com](http://www.kristeel.com)

**KRISTEEL is proud to call itself a "Full service stencil supplier".** with all current manufacturing technologies in-house to meet your printing needs.

- \* LASER CUT STENCILS
- \* CHEMICALLY ETCHED STENCILS
- \* DUAL TECHNOLOGY STENCILS ( a combo of chem etching the standard pitch component apertures & laser cut the fine pitch component apertures)

Whether you're a contract manufacturer or an OEM, you have one simple thing in common. When your line is down, you're losing money. With every tick of the clock your profits are disappearing. That's when you find out if your stencil vendor is really a part of your team.

It takes experience, skill and a genuine commitment to serve you, that's the kind of commitment you'll get from Kristeel. The same quality and service that made us partner to technology legends in the early days will make us a valuable asset to your SMT production Line

## Types of Stencil Manufactured In Kristeel

### LASER CUT STENCILS / CHEM-ETCH STENCILS

Manufactured in technical collaboration with M.E.T. of U.S.A.

Competency to manufacture fine pitch apertures. Tolerance on etched Aperture is  $\pm 1$  mil. Stencil stretched on frames using imported Polyester mesh. Straight-Sided features and cuts positive taper(0.5 mil) That facilitate Clean and accurate release of Solder paste achieves positional accuracies of better than 0.008 mm(0.5mil) over the entire screen area.

Our Production, Marketing & Design Dept. are trained overseas at our collaborators place to give you complete solution for SMT Stencils. Stringent Statistical Quality Control Norms. Manufacture of glue stencils for printing adhesives for double sided Boards an alternative to dispensing. Manufacture of Micro Stencils for printing & Rework. In house electro-polishing facility on request.

### ELECTRO-FORM STENCILS ON REQUEST

Electroforming is an additive process and differs from all other stencil manufacturing techniques, where metal is deposited to produce the apertures. Because it is an additive process, the resultant apertures are accurate, well defined and contain naturally smooth walls that combine with their trapezoidal formation to offer the best paste release characteristics from the finest apertures.

### STEP-UP-STEP DOWN STENCILS

Step Stencils are normally required to provide additional paste height in certain areas of the PCB [Step Up stencil] or to provide lower solder paste height in certain areas of the PCB [Step Down Stencil] There are also applications when the PCB has raised areas on the surface of board. In this case, a step relief pocket is required on the PCB side of the stencil. Kristeel offers step stencil options or all technology stencils.

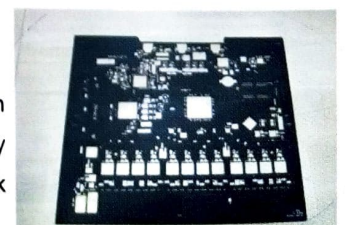
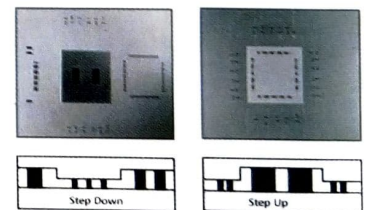
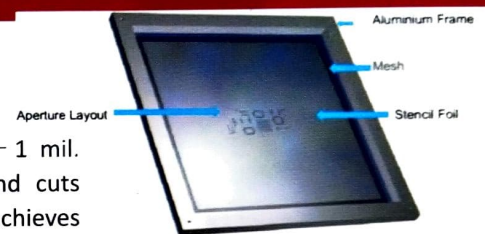
### MICRO STENCILS



Micro stencils are single component stencils, custom designed to fit your application. Kristeel Micro stencil Eliminate the need to remove neighboring components while printing on your loaded board. Micro stencil has formed sides for easy, holding and it comes with a matching squeegee.

### PCB INSPECTION TEMPLATES

Kristeel manufactures Inspection Template specifically for the board you are assembling, you can visually & easily identify components that are Missing or Out of Place. Simply place the overlay template over the loaded board and the problem placements will be obvious. Effective & quick way to perform quality control inspection on your boards.



## KRISTEEL MANUAL PRINTER

We at KRISTEEL have been your preferred supplier for SMT Stencils.

Now KRISTEEL has taken another leap forward by Launching more Quality products in our Range.

### ADVANTAGES

- 1) You can mount all types of Stencil frames (from 12" x 12" to 4' LED tube Stencil)
- 2) You can adjust your PCB with Stencil in X, Y & Z Direction also.
- 3) Provided tapping holes on machine bed so that you can print PCB's both sides.
- 4) MS Powder Coated Printer with attractive enamel Paint which is very sturdy & can not be moved from it's original place easily.
- 5) Adjustable knobs are provided so as to avoid tapping on Stencil frames.
- 6) Larger Bed Size as compared to printers available in market.
- 7) We are Manufacturing all types of LASER Cut Stencil also.
- 8) KRISTEEL Make Scale is provided on printer can give you reading of all frame sizes mounted on printer.
- 9) Very easy to use / Unskilled operator can use very easily.
- 10) Easy to carry anywhere at shop floor without any electricity required.

### METAL SQUEEGEE BLADES

Kristeel Metal squeegee blades are proven to provide improved print definition and more uniform print volume across the entire image area and consistency by offering a rigid, low-friction, steel edge for cleaner prints. Manufactured to fit any of the common metal squeegee holders including DEK, MPM, Fuji, SMTech, and Panasonic

### STENCIL FOIL ADAPTOR SYSTEM

- 1) The same frame can be used for multiple Projects
- 2) The foil is clamped directly into the frame without the need of glue
- 3) No need to buy new frames or recycling old ones
- 4) Less storage space is required
- 5) Stencil can be exchanged within a minute
- 6) Available in 23" x 23" & 29" x 29" Sizes

### SELECTIVE WAVE PALLETS

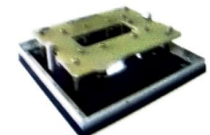
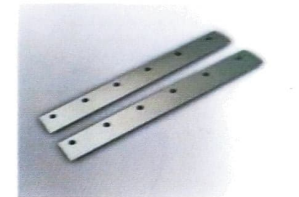
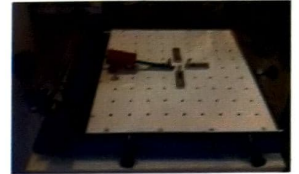
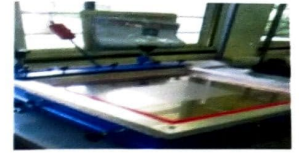
Kristeel selective wave solder pallets are the fastest and most cost-effective method of soldering Through-hole components poster flow. Pallets permit wave solder processing of through-hole components while masking solder-side SMT components & critical board features from molten solder.

### UNIVERSAL WAVE PALLETS

Kristeel Universal wave solder pallets are designed to support a PCB that Would otherwise be unable to Processed through wave soldering Center bars easily adjust for PCB width.

### WAVE PALLETS WITH TOP CATCH

Kristeel Wave Solder Pallet with Top catch Spring loaded hold down and coil locator Makes for perfect PCB's every time. Simple & fast error proof orientation.



### ENCODER DISK & PRECISION SHEET METAL PART

Custom designed optical encoder discs for high-accuracy control, positioning & measurement applications. Simple or complex bespoke designs for low, medium or high-volume requirements are available to encoder specifiers requiring cost-effective, accurate & durable solutions. The burr and stress-free components afford high mechanical strength & can be individually produced to meet the most demanding needs.

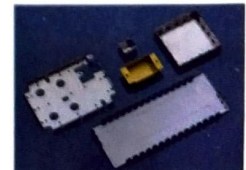


### DEFENCE APPLICATION



Cathode Ring, Getter Ring, Assembling Ring, Grids & Kovar Lids, Plating Masks Shielding Cover and Fence

### RF & EMI SHIELDING



Customer Made Shielding

## Kristeel Provides Effective Solutions and Unrivalled Services:

- \* Complete Stencil technology, choice
- \* Increased Fine Pitch Aperture Consistency
- \* Produces edges that are Clean and Sharp, means Clean, Easy No-stick release.
- \* Capable of eliminating Costly Rejects and Reworks
- \* Specific Stencil thicknesses matched to component needs
- \* Statistical process control is the backbone of our Quality ethics
- \* Dark Fudicials which does not disappear in process.
- \* Durable Full hard Stainless Steel Material.
- \* Long Lasting Bonding--Solvent Steel Material
- \* Resilient heavy-duty polyester mesh
- \* Industry standard frames always in stock
- \* Fast Turnaround Same day turnarounds available

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BANGLORE UNIT



MUMBAI UNIT



SILVASSA UNIT

## CORPORATE OFFICE

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Kristeel-Shinwa is ISO 9001: 2015 Certified  
from TUV Sudeutschland Group -Germany.

SHINWA, JAPAN -Measuring Instruments & Gauges.

M.E.T., USA -SMT Stencils, Micro - Stencils, Templates, Squeezes Etc.

M.E.C. SEFAR, USA -Thick Film Screens For Solar & Hybrid Circuit.