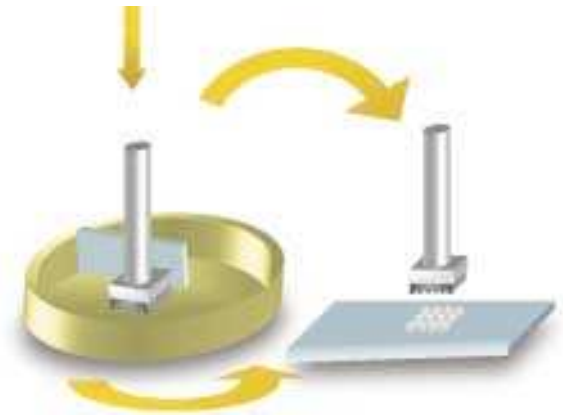


STAMPING TOOLS INTRODUCTION

Epoxy stamping was used extensively before the appearance of more sophisticated dispensing techniques. Today, stamping tools still represent a viable and inexpensive solution for prototyping, small production series or for very small die size assembly.

The adhesive paste is placed in a rotating cup which surface is leveled by a blade set at the required height. The stamping tool is plunged into the paste and then transfers the collected amount of paste on the target pad.



TIP CONFIGURATION

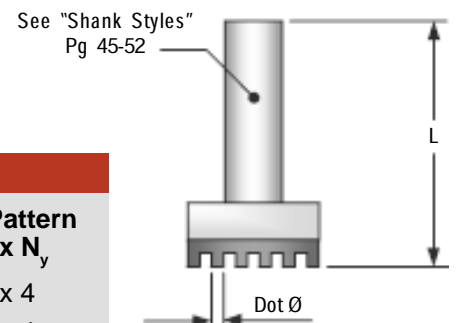
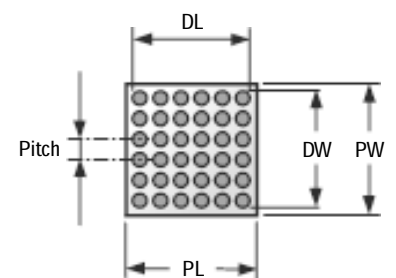
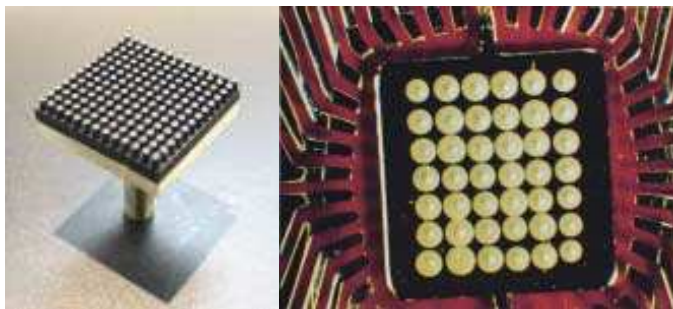
- **REST** Rubber Epoxy Stamping Tool, from die size .051" / 1.30mm and above.
- **SEST** Steel Epoxy Stamping Tool, from die size .006" / 0.15mm and above.

REST : RUBBER EPOXY STAMPING TOOL

The design provides a dot matrix epoxy print out. The layout of the tool pins assures a consistent amount of die attach material to be placed on the pad area.

Three rubber pad patterns are available with different dot diameter and pitch.

- 1) Pad # 3, dot diameter .0118" / 0.30mm , pitch .031" / 0.80mm
- 2) Pad # 5, dot diameter .0197" / 0.50mm , pitch .040" / 1.00mm
- 3) Pad # 6, dot diameter .0236" / 0.60mm , pitch .040" / 1.00mm



How To Order

	Shank Style & Length	Tip Config.	Pad #	Dot Pattern $N_x \times N_y$
EXAMPLE :	2102 - .625	- REST	- 5	- 4 x 4
	2102 - 16	- REST	- 6	- 8 x 4

HOW TO SELECT THE RIGHT RUBBER EPOXY STAMPING TOOL

Even if empirical experiments give the only true image of the final dispense output, we can approach the desired result by considering the following rule of the thumb.

- The epoxy coverage of the tool chosen must be larger than the die size while the physical Pad pattern PL x PW should be equal or smaller than the die size. For the standard pad layouts, the value PL ,PW, DL and DW are given in the table and can be calculated with the following formula. (N_x = Number of dots in X Axis, N_y = Number of dots in Y Axis)
 Pad size PL x PW = ($N_x \cdot \text{Pitch}$) x ($N_y \cdot \text{Pitch}$)
 Dot outline DL x DW = [$(N_x - 1) \cdot \text{Pitch} + \text{Dot } \varnothing$] x [$(N_y - 1) \cdot \text{Pitch} + \text{Dot } \varnothing$]
- When the die is pressed onto the epoxy layout, enclosed by the dot outline DL x DW , the die attach material will spread out and the epoxy coverage will be extended by approximately :
 + .008"- .012" / 0.20-0.30mm for Pad # 3
 + .020"- .024" / 0.50-0.60mm for Pad # 5
 + .024" / 0.60mm for Pad # 6
- Whenever possible it is advisable to choose a pattern that has closer gap between the dots. For high epoxy viscosity, best results are obtained with larger dots spacing.

in inch	Pad # 3		Pad # 5		Pad # 6	
Dot Pattern	Dot Outline DLxDW	Epoxy Coverage	Dot Outline DLxDW	Epoxy Coverage	Dot Outline DLxDW	Epoxy Coverage
2 x 2	.045 x .045	.055 x .055	.060 x .060	.080 x .080	.062 x .062	.084 x .084
2 x 3	.045 x .075	.055 x .085	.060 x .100	.080 x .120	.062 x .102	.084 x .124
3 x 3	.075 x .075	.085 x .085	.100 x .100	.120 x .120	.102 x .102	.124 x .124
3 x 4	.075 x .105	.085 x .115	.100 x .140	.120 x .160	.102 x .142	.124 x .164
4 x 4	.105 x .105	.115 x .115	.140 x .140	.160 x .160	.142 x .142	.164 x .164
4 x 5	.105 x .140	.115 x .150	.140 x .180	.160 x .200	.142 x .182	.164 x .204
5 x 5	.140 x .140	.150 x .150	.180 x .180	.200 x .200	.182 x .182	.204 x .204
5 x 6	.140 x .170	.150 x .180	.180 x .220	.200 x .240	.182 x .222	.204 x .244
6 x 6	.170 x .170	.180 x .180	.220 x .220	.240 x .240	.222 x .222	.244 x .244
6 x 7	.170 x .200	.180 x .210	.220 x .260	.240 x .280	.222 x .262	.244 x .284
7 x 7	.200 x .200	.210 x .210	.260 x .260	.280 x .280	.262 x .262	.284 x .284
7 x 8	.200 x .230	.210 x .240	.260 x .300	.280 x .320	.262 x .302	.284 x .324
8 x 8	.230 x .230	.240 x .240	.300 x .300	.320 x .320	.302 x .302	.324 x .324
8 x 9	.230 x .265	.240 x .275	.300 x .340	.320 x .360	.302 x .342	.324 x .364

in mm	Pad # 3		Pad # 5		Pad # 6	
Dot Pattern	Dot Outline DLxDW	Epoxy Coverage	Dot Outline DLxDW	Epoxy Coverage	Dot Outline DLxDW	Epoxy Coverage
2 x 2	1.1 x 1.1	1.4 x 1.4	1.5 x 1.5	2.0 x 2.0	1.6 x 1.6	2.2 x 2.2
2 x 3	1.1 x 1.9	1.4 x 2.2	1.5 x 2.5	2.0 x 3.0	1.6 x 2.6	2.2 x 3.2
3 x 3	1.9 x 1.9	2.2 x 2.2	2.5 x 2.5	3.0 x 3.0	2.6 x 2.6	3.2 x 3.2
3 x 4	1.9 x 2.7	2.2 x 2.9	2.5 x 3.5	3.0 x 4.0	2.6 x 3.6	3.2 x 4.2
4 x 4	2.7 x 2.7	2.9 x 2.9	3.5 x 3.5	4.0 x 4.0	3.6 x 3.6	4.2 x 4.2
4 x 5	2.7 x 3.6	2.9 x 3.8	3.5 x 4.5	4.0 x 5.0	3.6 x 4.6	4.2 x 5.2
5 x 5	3.6 x 3.6	3.8 x 3.8	4.5 x 4.5	5.0 x 5.0	4.6 x 4.6	5.2 x 5.2
5 x 6	3.6 x 4.3	3.8 x 4.6	4.5 x 5.5	5.0 x 6.0	4.6 x 5.6	5.2 x 6.2
6 x 6	4.3 x 4.3	4.6 x 4.6	5.5 x 5.5	6.0 x 6.0	5.6 x 5.6	6.2 x 6.2
6 x 7	4.3 x 5.1	4.6 x 5.3	5.5 x 6.5	6.0 x 7.1	5.6 x 6.6	6.2 x 7.2
7 x 7	5.1 x 5.1	5.3 x 5.3	6.5 x 6.5	7.1 x 7.1	6.6 x 6.6	7.2 x 7.2
7 x 8	5.1 x 5.8	5.3 x 6.1	6.5 x 7.5	7.1 x 8.1	6.6 x 7.6	7.2 x 8.2
8 x 8	5.8 x 5.8	6.1 x 6.1	7.5 x 7.5	8.1 x 8.1	7.6 x 7.6	8.2 x 8.2
8 x 9	5.8 x 6.7	6.1 x 7.0	7.5 x 8.5	8.1 x 9.1	7.6 x 8.6	8.2 x 9.2