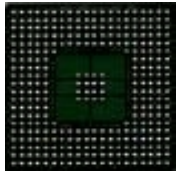


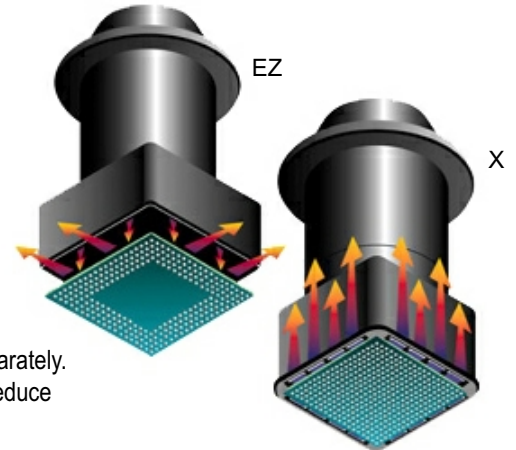


Nozzle Data Sheet for:



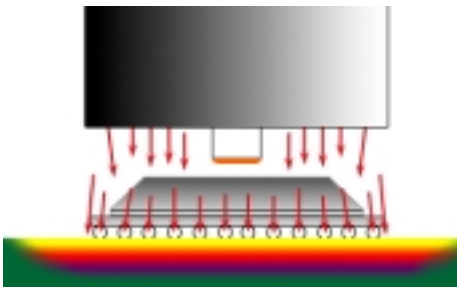
Plastic Ball Grid Arrays

Component Identification: PBGA, EPBGA
 Nozzle Designation: EZ, X
 Heating Methodology: Heat Through

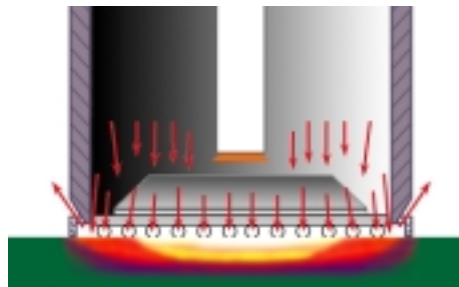


- PBGAs listed utilize eutectic solder for the formation of the sphere.
- EZ nozzles require zero adjacent clearance. EZ nozzles do not include a component insertion tool as they are not package specific. Component insertion tools can be ordered separately.
- X nozzles require .100" adjacent clearance. X nozzles include a component insertion tool to reduce handling and simplify insertion of the component into the nozzle.

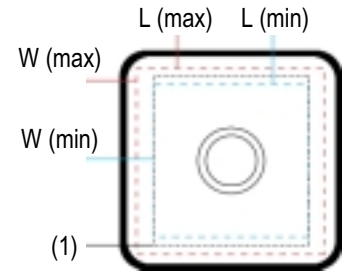
EZ Nozzle Heat Flow



X Nozzle Heat Flow



EZ Nozzle Sizing



(1) - rectangular components within min-max size.

EZ Nozzle #	Part Size (mm)	X Nozzle #	Part Size (mm)	Industry Reference
N14EZ22	10-14 x 18-22 rect	NA570X885	14.02 x 22.2 x 2.27 H	PBGA-119/153 Amkor/Sony/Motorola
N15EZ15	13 sq - 15.5 sq	NA549X608	13.70 x 15.2 x 2.54 H	PBGA-68
	13 sq - 15.5 sq	NA608X608	15.2 sq x 2.32 H	PBGA-121/156/160/196 Amkor
N25EZ25	21 sq - 25.5 sq	NA923X923	23.2 sq x 2.46 H	PBGA-169/208/217/240/249 Amkor
	21 sq - 25.5 sq	NA935X935	23.5 sq x 2.40 H	PBGA-169 LSI
	21 sq - 25.5 sq	NA1002X1002	25.2 sq x 1.85 H	PBGA-357/361 Motorola
N27EZ27	25 sq - 27.5 sq	NA1081X1081	27.2 sq x 2.54 H	PBGA-225/256/272/300/316/324 Amkor/Intel
	25 sq - 27.5 sq	NA1093X1093	27.5 sq x 2.54 H	PBGA-225/256 LSI
N31EZ31EB	27 sq - 31.5 sq	NA1238X1238	31.2 sq x 2.54 H	PBGA-304/329/360/385 Amkor
	27 sq - 31.5 sq	NA1246X1246	31.2 sq x 2.54 H	PBGA-304
N35EZ35EB	31 sq - 35.5 sq	NA1396X1396	35.2 sq x 2.54 H	PBGA-313/352/388/400/420/456 Amkor
	31 sq - 35.5 sq	NA1396X1396D	35.2 sq x 2.54 H	EPBGA-372 AT&T/Sun
	31 sq - 35.5 sq	NA1408X1408	35.5 sq x 2.54 H	PBGA-313/352/388 LSI
N40EZ40EB	35 sq - 40.5 sq	NA1494X1494	37.7 sq x 2.46 H	PBGA-553/ase
	35 sq - 40.5 sq	NA1593X1593	40.2 sq x 2.98 H	PBGA-596 LSI
	35 sq - 40.5 sq	NA1593X1593D	40.2 sq x 2.98 H	EPBGA-596 LSI Cavity Up
	35 sq - 40.5 sq	NA1594X1594	40.2 sq x 3.18 H	EPBGA-479 LSI Cavity Down
N44EZ44EB	40 sq - 44.5 sq	NA1691X1691	42.5 sq x 3.445 H	PBGA-540 C1855 DEC
	40 sq - 44.5 sq	NA1711X1711	43.1 x 3.94 x 4.29 H	PBGA-521 SUN lid w/studs
N45EZ45EB	44 sq - 45.5 sq	NA1790X1790	45.2 sq x 2.98 H	EPBGA-655 LSI Cavity Up

Air-Vac recommends the EZ style nozzle for the highest thermal performance, balance and efficiencies.

X style nozzles are package specific.