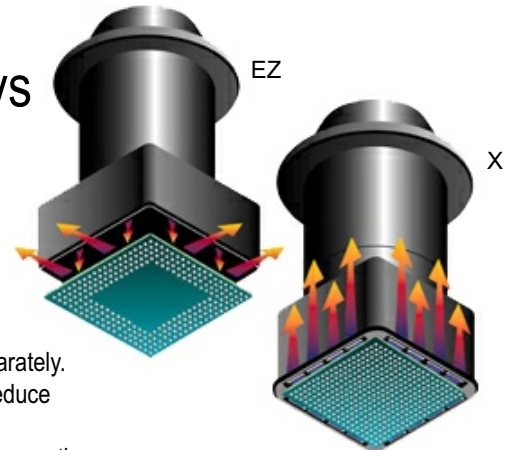


Nozzle Data Sheet for:

Ceramic Ball/Column Grid Arrays

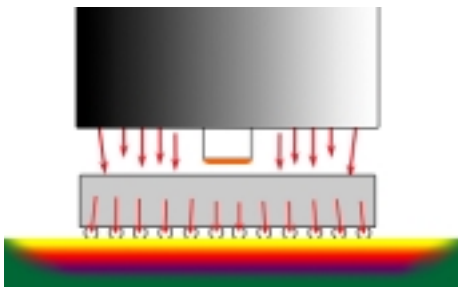


Component Identification: CBGA/CCGA
 Nozzle Designation: EZ, X
 Heating Methodology: Heat Through

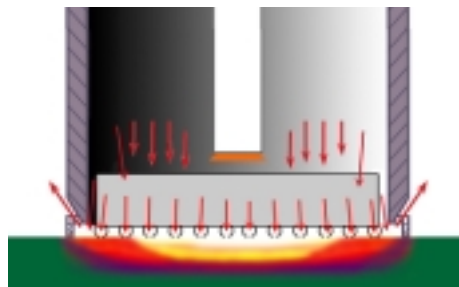


- CBGAs/CCGAs listed typically utilize 90/10 solder for the formation of the sphere/column.
- EZ nozzles require zero adjacent clearance. EZ nozzles do not include a component insertion tool as they are not package specific. Component insertion tools can be ordered separately.
- X nozzles require .100" adjacent clearance. X nozzles include a component insertion tool to reduce handling and simplify insertion of the component into the nozzle.
- Thickness of the ceramic carrier and aluminum cap can vary significantly. Please carefully measure the thickness of your device prior to ordering an X style nozzle.

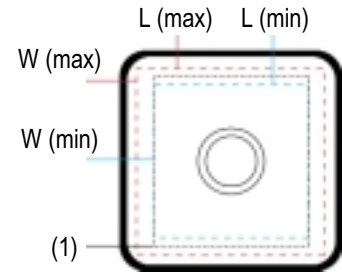
EZ Nozzle Heat Flow



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
N21EZ21-1	19 sq - 21.5 sq	NA845X845	21.0 sq x 3.16 H	CBGA-255/256 Motorola
N25EZ25	21 sq - 25.5 sq	NA842X1000	21.0 x 25.0 x 3.16 H	CBGA-303/304 Motorola
	21 sq - 25.5 sq	NA1001X1001D1	25.0 sq x 4.20 H	CBGA 361 Motorola/IBM/Mercury
	21 sq - 25.5 sq	NA1001X1001	25.1 sq x 5.00 H	CBGA-361
N25EZ25EB	21 sq - 25.5 sq	NA1001X1001D	25.1 sq x 5.50 H	CBGA-361
N35EZ35EB	31 sq - 35.5 sq	NA1007X1302	25.2 x 32.5 x 5.25 H	CBGA-474 IBM
	31 sq - 35.5 sq	NA1305X1305	32.7 sq x 8.13 H	CCGA-625 IBM
	31 sq - 35.5 sq	NA1305X1305D	32.7 sq x 5.24 H	CCGA-625 IBM
	31 sq - 35.5 sq	NA1305X1305D1	32.7 sq x 5.97 H	CCGA-625 IBM
	31 sq - 35.5 sq	NA1305X1305D2	32.7 sq x 2.79 H	CCGA-625 IBM
	31 sq - 35.5 sq	NA1305X1305D3	32.7 sq x 6.15 H	CCGA-625 IBM
	31 sq - 35.5 sq	NA1305X1305D4	32.7 sq x 6.86 H	CCGA-625 IBM
	31 sq - 35.5 sq	NA1305X1305D5	32.7 sq x 7.75 H	CCGA-625 IBM
	31 sq - 35.5 sq	NA1305X1305D6	32.7 sq x 7.50 H	CCGA-625 IBM
	N44EZ44EB	40 sq - 44.5 sq	NA1730X1730	44.0 sq x 9.0 H

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

X style nozzles are package specific.