AURORA™ VACUUM125

BTU AN AMTECH COMPANY

DUAL-LANE HIGH YIELD VACUUM REFLOW



The new **Aurora Vacuum Reflow Oven** is engineered to maximize yield through precision vacuum processing and advanced thermal control. A soft-start vacuum system minimizes component movement and process-induced defects, while integrated heating inside the vacuum chamber delivers unmatched profile accuracy. Three independent conveyors maximize throughput, and a low-vibration transport system protects sensitive assemblies throughout the process. Completing the design is a 620.0 x 711.0 mm (24.4 W x 28.0 in.) vacuum chamber with titanium conveyor materials. This design accommodates large format PCB's, optional dual lane operation providing the performance, flexibility and productivity required for next generation electronics manufacturing.



STANDARD FEATURES

- Exclusive vacuum soft start
- Bell jar vacuum chamber
- Easy access hinged chamber
- O-Ring seal (Perfluoroelastomer)
- Radiant panel heater
- Convective assist chamber heating
- Oil lubricated rotary vane pump
- Optical vacuum chamber sensors
- 3 independent conveyors
- Vacuum system diagnostics

SMT Reflow

Semi Pack

SPECIFICATIONS*

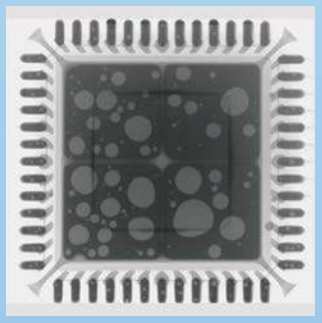
Model	Aurora 125N50-VAC28
	Temperature Ratings:
Process Chamber	350°C
Vacuum Chamber	300°C
Convection Heated Zones	10 top and bottom
Vacuum Chamber Internal	2 top radiant panel zones
Vacuum Chamber Heat Assist	3 heated convection zones
Conveyor System	edge rail support
Vacuum Chamber Zones	1 zone
Vacuum Chamber Size	620.0 x 711.0 mm (24.4 in. x 28.0 in.)
Vacuum Specifications:	
Vacuum Level	20 Torr (5 Torr optional)
Pump Down Time	15-20 seconds (typical)
Hold Time	10-60 seconds
Refill Time	2-4 seconds (typical)
Atmosphere	nitrogen / air

* All specifications are subject to change without notice

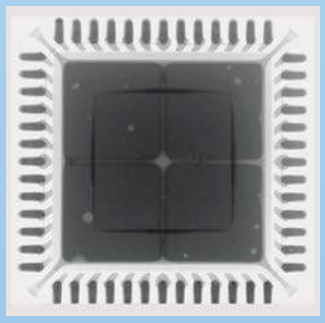
WHAT IS SOLDER VOIDING?

Voiding occurs when flux or solder paste oxidation is entrapped in the solder joint. There may be several contributing factors to solder voiding. The solder paste formulation, flux type, pad design, size of the pad, thermal profile and stencil design are examples of contributing factors. A common voiding area is in thermal pads. Shown at right is an MFL processed with and without vacuum reflow. BTU's vacuum reflow solution is designed to reduce voiding to <5% (process dependent).

Traditional Reflow



Vacuum Reflow



LEARN MORE

Scan to learn more about high volume, low yield vacuum reflow with Aurora Vacuum

VACUUM CHAMBER



- Fully accessible design for maintenance and serviceability
- Bell jar type chamber mechanism for reliable vacuum sealing and trouble-free operation
- High precision optical sensors used for product tracking and automatic sensing operations
- Rotary vane, wet-type vacuum pump

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