



# YES-PB 12-2P-CP High Temperature Vacuum Oven

For Curing Polyimide, BCB, Low-K Dielectrics & Copper Anneal

## Specifications

Hardware			
Clean Room Compatibility	Class 10		
Chamber Cleanliness	Class 1		
Wafer Size	Up to 300mm		
Capacity	Up to 50 wafers/batch (two 25 wafer cassettes)		
Operation Temperature	Ambient to 450 °C Optional high temperature version: Ambient to 550°C		
N <sub>2</sub> Flow Rate	1 SCFM		
Nitrogen Consumption	15-25 liters/min.		
Interior Chamber Dimensions	53.34 cm barrel (ID) x 104.06 cm (D) (21" x 40.97")		
Overall System Dimensions	89.48 cm (W) x 174.57 cm (D) x 138.7 cm (H) (35.23" x 68.73" x 54.61")		
Chamber Material	316L stainless steel		
Process Gas Inputs	1 standard, up to 3 optional		
Mass Flow Controllers	Optional – up to 3 for gas mixing		
Laminar Flow Filter	100 micron Mott™ plate filter		
Cleanliness	Particle reduction in most applications		
Software			
Number of Recipes	8 temperature profiles		
Number of Steps for Each Recipe	16 program steps		
Range of Segment Time	0-99 hours		
Resolution of Timer Setting	1 minute		
Performance			
Temperature Uniformity	± 5 °C during dwell after all temperature points have stabilized for 15 minutes (Full load 50 300mm wafers) at pressures above 50 Torr)		
Average Heat-Up Rate (150°C - 450°C)	3.5 °C/min.		
Average Cool-Down Rate (450°C - 150°C)	3.0 °C/min.		
Oxygen Concentration	10 ppm over background		
Additional			
Power Requirements	208V, 40 amps, 50/60 Hz, 3 phase		
Tool Weight (approx.)	894 pds (406 kgs)		
# of cassettes that fit inside the laminar flow zone			
2 inch wafers	25	150 mm wafers	10
3 inch wafers	15	200 mm wafers	3
100 mm wafers	10	300 mm wafers	2
125 mm wafers	10		

*Tool temperature performance is a combination of temperature control accuracy and temperature uniformity. Accuracy is the deviation of the average product temperature from the set point. Uniformity is the deviation between the maximum and minimum product temperatures and is not related to the set point. Accuracy is calculated as set point – average temperature. Uniformity is calculated as (max-min)/(max+min). YES-PB series tools have dwell accuracy of +/-1.5°C after stabilization. YES-450PB12-2P-CP has a uniformity of +/-5°C. After stabilizing at dwell, all product temperatures should be within 10°C or 14°C of each other (depending on the tool) and within 7°C or 8.5°C of set point (depending on the tool).*



## Contact Us

When you're ready to run process tests, a demonstration can be arranged using your chemicals and samples. Call +1 925-373-8353 (worldwide), 1-888-YES-3637 (US toll free), or visit us online at [www.yieldengineering.com](http://www.yieldengineering.com).

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