

Clean Inert Ovens | Class 100, Oxygen Concentration: 20ppm

DTN430C/630C/450C/650C

Forced
ConvectionAutomatic
Overheating
PreventerOverheating
PreventerSelf-diagnostic
FunctionOvercurrent
Leakage Circuit
Breaker

Maximum operating temp.	DTN430C/630C: 360°C	DTN450C/650C: 500°C	Cleanliness	Class 100	Oxygen concentration	20ppm	Internal capacity	91L	261L
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Atmosphere furnace with cleanliness level 100 and oxygen concentration below 20ppm, mainly used for curing semiconductor wafers.

Features

- Maximum operating temperatures of 360°C and 500°C, with cleanliness level 100 and oxygen concentration below 20ppm, primarily used for curing semiconductor wafers (photoresist PI, PBO curing), glass substrate baking, high-precision annealing, etc.
- Using a high-temperature-resistant high-performance filter, maintaining cleanliness level 100 inside the chamber, allowing for high-temperature baking in a clean environment.
- High gas-tightness pressure chamber construction, with short oxygen concentration reaching time and extremely low N₂ consumption. Maintaining high gas-tightness through magnetic sealing and a water-cooling mechanism to protect sealing components from thermal effects.
- Quick heating and cooling, with adjustable heating and cooling rates. Equipped as standard with a system that condenses and recovers exhaust-gas condensate.

Safety

- Equipped with door detection switch, overheating preventer, oxygen concentration abnormality, nitrogen pressure detection, chamber pressure testing, nitrogen flow detection, cooling water flow detection, leakage sensor, overcurrent leakage protection and other devices.



Specifications

Model		DTN430C	DTN630C	DTN450C	DTN650C	
System		Nitrogen replacement + Forced convection				
Performance	Operating temp. range	Room temp. +50~360°C		Room temp. +50~500°C		
	GB standard	Temp. fluctuation	±0.3°C (at 360°C)		±0.5°C (at 500°C)	
		Average temp. deviation	±1.5°C (at 100°C), ±2°C (at 200°C), ±4°C (at 300°C), ±5°C (at 360°C)		±1.5°C (at 100°C), ±2°C (at 200°C), ±4°C (at 300°C), ±5°C (at 400°C), ±8°C (at 500°C)	
	JTM standard	Temp. adjusting accuracy	±0.3°C (at 360°C)		±0.5°C (at 500°C)	
		Temp. distribution accuracy	±5°C (at 360°C)		±8°C (at 500°C)	
	Max. temp. reaching time	Approx. 80 min		Approx. 120 min		
	Oxygen concentration	Below 20ppm				
	Oxygen concentration reaching time	≤20 min (250L/min nitrogen)	≤25 min (250L/min nitrogen)	≤20 min (250L/min nitrogen)	≤25 min (250L/min nitrogen)	
Cleanliness	Constant temperature maintained at level 100					
Composition	Interior material	Stainless steel plate				
	Exterior material	Cold rolled steel plate with chemical proofing coating				
	Insulating material	Aluminosilicate cotton				
	Heating method	Stainless steel heating pipe		Alloy heating wire		
	Heating power	Main heater	6.0kW	9kW	10.8kW	14.2kW
		N ₂ preheating	1kW			
Cooling mechanism	Stainless steel cooling water heat exchanger					
HEPA filter	Dust collection efficiency: 99.97% for 0.3µm particles					
Controllers	Temp. control method	PID control				
	Temp. controller	Liquid crystal touchscreen + PLC				
	Operation functions	Manual operation, automatic operation				
	Program mode	10 program operations, each program can set 10 segments				
	Additional functions	Operator level certification				
	Heater circuit control	SSR drive				
Sensors	K-type thermocouple (temperature control and overheating prevention)					
Safety device	Door detection switch, overheating preventer, oxygen concentration anomaly, overheating of N ₂ preheating, low water pressure detection, low N ₂ pressure detection, cooling water flow detection, N ₂ flow detection, fan overload detection, overcurrent leakage protection, etc.					
Specifications	Internal dimensions	450×450×450	660×600×660	450×450×450	660×600×660	
	External dimensions (W×D×H mm)	1090×1170×1570	1300×1320×1780	1090×1170×1570	1300×1320×1780	
	Internal capacity	91L	261L	91L	261L	
	Shelf layer/spacing	12 layers/30mm	19 layers/30mm	12 layers/30mm	19 layers/30mm	
	Exhaust vent	KF40				
	Nitrogen inlet	Rc1/2				
	Cooling water inlet	Rc3/4				
	Hot water outlet	Rc3/4, 2 pcs				
	Power supply (50/60Hz) rated current	3 phase AC380V 16A	3 phase AC380V 25A	3 phase AC380V 24A	3 phase AC380V 28A	
	Weight	Approx. 900kg	Approx. 1100kg	Approx. 900kg	Approx. 1100kg	
Options	Shelf plate, vacuum pump, temperature data logger, multicolor light tower, ethernet communication function, UPS backup power supply, scanner, PC components, temperature measurement components, etc.					

1 Sterilizers

2 Granulation and Spray Dryers

3 Furnaces

4 Ovens

5 Incubators

6 Plasma Equipment

7 Water Purifiers

8 Baths

9 Water Circulators

10 Rotary Evaporators

11 Stirrers & Shakers

12 Options