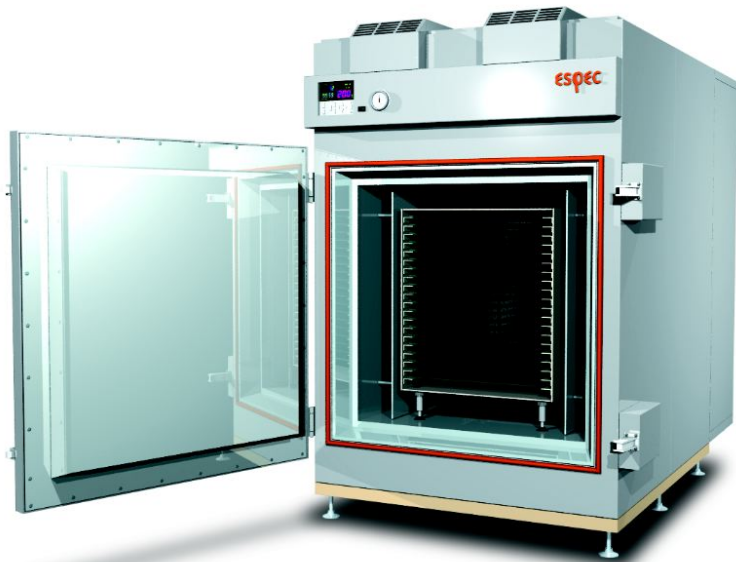


# Low Oxygen Clean Oven(SCO)

Realized "Low Oxygen Concentration: Below 10ppm, Cleanness: Class 10, and Maximum Temperature: 500°C!"

FPD-related Equipment → <http://www.espec.co.jp/english/products/products04.html>



Low Oxygen Clean Oven(SCO) has realized the specification which the former Clean Ovens never satisfied!

- Oxygen Concentration: Below 10ppm
- Cleanness: Class 10
- Temperature Property: Maximum 500°C (distribution  $\pm 5^\circ\text{C}$ )

### Usage Examples

- Semiconductor wafers and glass substrates for FPD
- Electronic parts for space and aviation
  - For the clean and high-temperature process under the low oxygen concentrate.
  - For the substitute for the costly vacuum machines (Reconsideration of the process)

## Strong Points

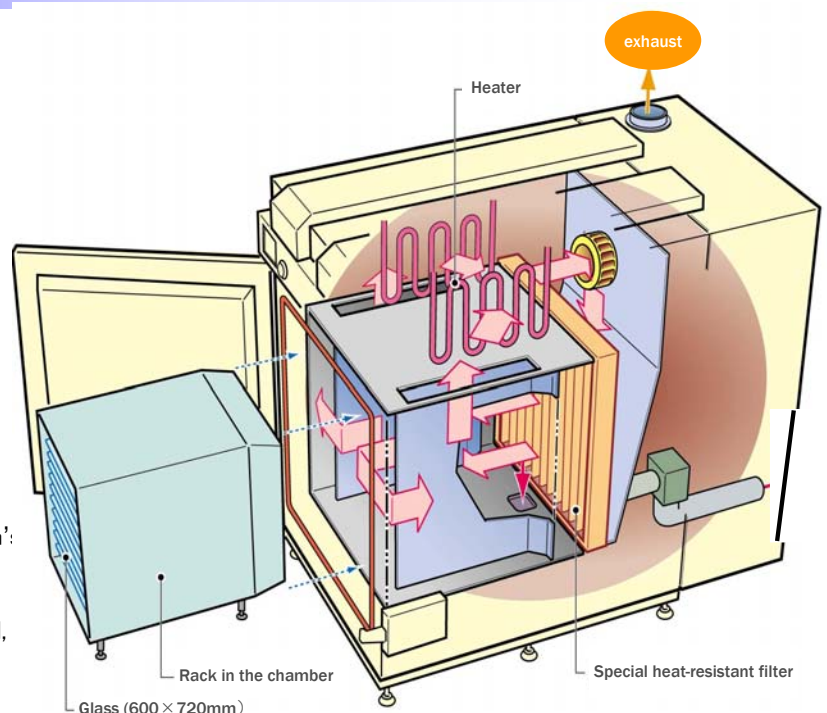
### Realized the Low Oxygen Concentration: Below 10ppm(OP)

The hot wave cycling type altered the common cooling type of introducing air outside into water cooler, and creates an airtight chamber.

In addition, the shafts of the blower motor use magnetic seal, and other fixing ports use metal seal, so as to raise the airtightness

### Cleanness Class 10 (0.3 $\mu\text{m}$ )

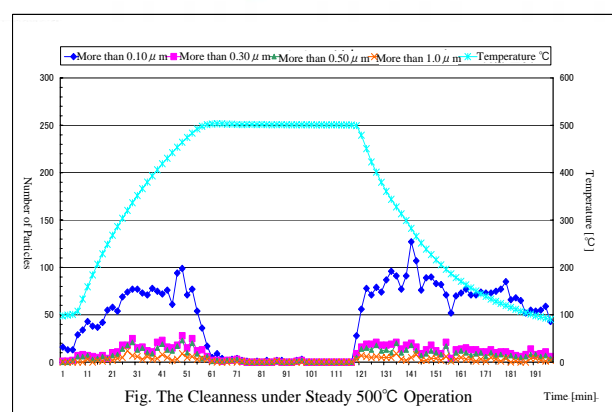
The oven adopted the materials taken measures for corrosion and thermal expansion. Moreover, this oven's peculiar construction and the heat-resistant filter realized the cleanness of class 10 (particle 3  $\mu\text{m}$  across) during not only the steady temperature period, but also the changing temperature period. It lessens the pile on the specimen during the process.



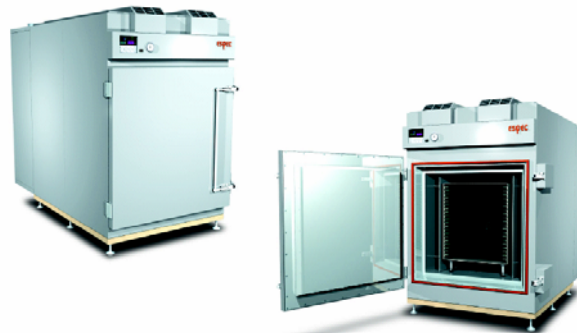
### Secure the High Property of Temperature Distribution $\pm 5.0^\circ\text{C}$ (at 500°C)

Setting the water cooler outside of the chamber clears away the unnecessary structure like a dumper. This produces a simple air conditioning system, under which the proper amount of cycling wind secures the temperature distributional property.

The simple air conditioning system saves the space. It helps to construct the adequate double inner walls and secures the certain air insulation.

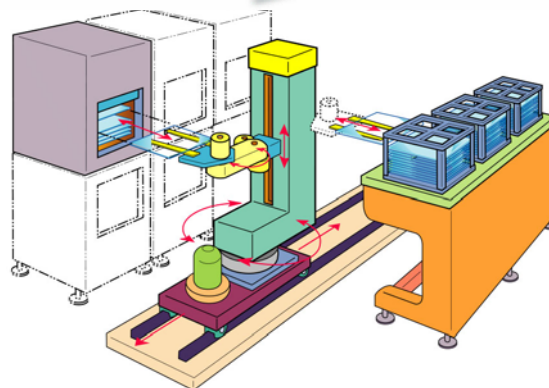


Other than chamber itself + batch processing with manual cart, this oven can be expanded in the automatic system.



An Example:  
ACCS(Clustery Conveyor Type)

The combination of conveyor robots and buffer modules can construct the automatic system as shown to the right. It is also possible to join Glove Box and various N2 conveyor modules.



Specification

Temperature Range	Low-temperature Type; +60°C~+300°C High-temperature Type; +100°C~+500°C
Temperature Distribution	±3.0°C (at 300°C) ±5.0°C (at 500°C)
Possible Specimen	Wafer carrier 8inch, 12inch Glass substrate W370 × L470、W600 × L720、 W730 × L920 Please contact us about other specimen.
Oxygen Concentration	Below 100ppm / Below 10ppm
Cleanness	Class10 (0.3 μ m)

FPD-related Equipment → <http://www.espec.co.jp/english/products/products04.html>



If you have any questions or your request, please contact to our customer center.  
<http://www.espec-global.com/>

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## Digital Consumer Electronics



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## Information Technology



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## Automobile



- In-vehicle sensors <http://www.espec.co.jp/english/products/market/auto/sensor.html>
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- Car navigation system <http://www.espec.co.jp/english/products/market/auto/carnavi.html>
- ECU <http://www.espec.co.jp/english/products/market/auto/ecu.html>
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- PCB <http://www.espec.co.jp/english/products/market/auto/print.html>

## New Energy



- Fuel cell <http://www.espec.co.jp/english/products/market/new/fuelbattery.html>
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- Secondary battery <http://www.espec.co.jp/english/products/market/new/secondbattery.html>