Multifunctional Thermal Processing Equipment

Pressure/Vacuum Compact Clean Oven
PCO-083TA

Wider control range for pressure and temperature
Both pressure and vacuum treatments can be performed with only one device.
Arbitrarily-specified pressure from 0 to 0.5 MPa is useful for pressurized applications.
Heat treatment up to 350°C is available for resin applications at high temperature, e.g., polyimide curing.

Space saving
A small footprint is achieved in spite of a large chamber to load 10 wafers of 200 mm in diameter.

High performance for R&D or small production
Simple operation and easy setup of temperature and pressure promote R&D activities.
High efficiency is obtained by programmable temperature control and adjustable pressure condition.

Several safety devices
High safety is ensured by a door lock system at pressurization, an overheat protector, and safety valves for over pressure.

- Maximum operating temperature: 350°C (PCO-083TA)
- Maximum operating temperature: 400°C (PCO-083TAH)
- Maximum operating pressure: 0.5 MPa
- Ultimate vacuum pressure: 10 Pa
- Adjustable increasing rates of temperature / pressure
- Small footprint less than 1m²
- Excellent temperature uniformity
- Exchangable stainless steel interior
- Signal tower to indicate the status of operation

The compact oven is applicable to the various fields;
- A wide variety of heat-treatment processes under pressurization / depressurization
- Low oxygen cure for polyimide
- Pressure-and-heat treatment for removing bubbles in seal or adhesion resins.
- Material synthesis under pressure.
**Example of Pressure-and-heat treatment**

*Before* and *After* diagrams show the effect of pressure-and-heat treatment on bubbles in a resin.

- **Bubbles disappear after pressure-and-heat treatment.**

Best fitted to thermal treatment in the mounting process of semiconductor devices, etc.

### Specifications

<table>
<thead>
<tr>
<th>Property</th>
<th>Details</th>
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<tbody>
<tr>
<td>Temperature property</td>
<td>Maximum 350°C (distribution ±5°C)</td>
</tr>
<tr>
<td>Pressure range</td>
<td>Press: 0 to 0.5 MPa, Vac: ca. 10 Pa (ultimate)</td>
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<tr>
<td>Max. sample size</td>
<td>φ200 mm</td>
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<td>Capacity</td>
<td>φ240 x H160 mm</td>
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<tr>
<td>Exchange gas</td>
<td>N₂ (5-6 MPa)</td>
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<tr>
<td>Internal material</td>
<td>Stainless steel plate (exchangeable)</td>
</tr>
<tr>
<td>Power supply</td>
<td>200 V, 50/60 Hz, 2.5 kVA</td>
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<tr>
<td>Outside dimensions</td>
<td>W640xD520xH650 (mm)</td>
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<tr>
<td>Weight</td>
<td>85 kg</td>
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</tbody>
</table>

**Top view** and **Front view** diagrams show the dimensions of the device:

- **Top view:** 640 x 520 x 650 mm
- **Front view:** 640 x 650 mm

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