Temperature Chambers
Temperature & Humidity Chambers
## Technical data

### PERFORMANCES FOR TEMPERATURE TESTS

#### With temperature-changing speed of 1K/min and 2K/min

<table>
<thead>
<tr>
<th>Type</th>
<th>Volume</th>
<th>Inside dimensions, W×H×D</th>
<th>Minimum temperature/°C</th>
<th>Maximum temperature/°C</th>
<th>Temperature-changing rate heating/°C/min</th>
<th>Temperature-deviation in time</th>
<th>Temperature homogeneity in space</th>
<th>Heat compensation at -20°C/W</th>
<th>Heat compensation at -20°C/W</th>
<th>Temperature &amp; humidity control range</th>
</tr>
</thead>
<tbody>
<tr>
<td>SH/SU-242</td>
<td>22.5</td>
<td>300x300x250</td>
<td>-40</td>
<td>+150</td>
<td>2.1</td>
<td>2.5 to 4.0</td>
<td>±0.3 to ±0.5</td>
<td>150</td>
<td>80</td>
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<td>PSL/PG-2J</td>
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#### With temperature-changing speed of 3K/min

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<thead>
<tr>
<th>Type</th>
<th>Volume</th>
<th>Inside dimensions, W×H×D</th>
<th>Minimum temperature/°C</th>
<th>Maximum temperature/°C</th>
<th>Temperature-changing rate heating/°C/min</th>
<th>Temperature-deviation in time</th>
<th>Temperature homogeneity in space</th>
<th>Heat compensation at -20°C/W</th>
<th>Heat compensation at -20°C/W</th>
<th>Temperature &amp; humidity control range</th>
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<tbody>
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<td>ARS/ARG-0930</td>
<td>390</td>
<td>700x800x700</td>
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1: Discontinuous
2: Temperature of change in the temperature range excluding ±10% of max/min temperature.
3: Reference data (not guaranteed data)

### PERFORMANCES FOR CLIMATIC TESTS

#### Temperature & humidity control range

**Diagram 1**
- With no specimen and under ambient temperature at 23°C.
- Continuous operation at or below -40°C is limited because of frost formation on the cooler and dehumidifier.

**Diagram 2**
- With no specimen and under ambient temperature at 23°C.
- Continuous operation at or below -40°C is limited because of frost formation on the cooler and dehumidifier.

**Diagram 3**
- With no specimen and under ambient temperature at 23°C.
- Continuous operation at or below -40°C is limited because of frost formation on the cooler and dehumidifier.
### PERFORMANCES FOR TEMPERATURE TESTS

**With temperature-changing speed of 5K/min**

<table>
<thead>
<tr>
<th>Type</th>
<th>Volume</th>
<th>Inside dimensions, WxDxH</th>
<th>Minimum temperature</th>
<th>Maximum temperature</th>
<th>Temperature-changing rate cooling</th>
<th>Temperature-changing rate heating</th>
<th>Temperature deviation in time</th>
<th>Temperature homogeneity in space</th>
<th>Heat compensation at 23°C</th>
<th>Heat compensation at 2°C</th>
<th>Temperature &amp; humidity control range</th>
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<td>300x300x250</td>
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<td>+150</td>
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<td>5.0</td>
<td>±0.3 to ±0.5</td>
<td>2.5 to 4.0</td>
<td>170</td>
<td>130</td>
<td>*Refer to diagram 1</td>
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<tr>
<td>ARS/ARGF-0220</td>
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<td>+180</td>
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<td>3000</td>
<td>1300</td>
<td>*Refer to diagram 3</td>
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<tr>
<td>SML/SMU-2</td>
<td>1800</td>
<td>1200x1000x1500</td>
<td>-40</td>
<td>+180</td>
<td>5.0</td>
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<td>±0.5 to ±1.0</td>
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<td>12500</td>
<td>7000</td>
<td>*Refer to diagram 4</td>
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<td>SMS/SMG-2</td>
<td>1800</td>
<td>1200x1000x1500</td>
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**With temperature-changing speed of 10K/min**

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<th>Minimum temperature</th>
<th>Maximum temperature</th>
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<th>Temperature-changing rate heating</th>
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<th>Temperature homogeneity in space</th>
<th>Heat compensation at 23°C</th>
<th>Heat compensation at 2°C</th>
<th>Temperature &amp; humidity control range</th>
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<tbody>
<tr>
<td>ARS/ARGF-0250-10</td>
<td>249</td>
<td>600x830x500</td>
<td>-70</td>
<td>+180</td>
<td>10.0</td>
<td>10.0</td>
<td>±0.3</td>
<td></td>
<td>6000</td>
<td>4900</td>
<td>*Refer to diagram 5</td>
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<tr>
<td>ARS/ARGF-0400-10</td>
<td>398</td>
<td>600x830x800</td>
<td>-70</td>
<td>+180</td>
<td>10.0</td>
<td>10.0</td>
<td>±0.3</td>
<td></td>
<td>6000</td>
<td>4900</td>
<td>*Refer to diagram 5</td>
</tr>
<tr>
<td>ARS/ARGF-0800-10</td>
<td>784</td>
<td>1000x980x800</td>
<td>-70</td>
<td>+180</td>
<td>10.0</td>
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<td>±0.3</td>
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**With temperature-changing speed of 15K/min**

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<th>Maximum temperature</th>
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<th>Temperature-changing rate heating</th>
<th>Temperature deviation in time</th>
<th>Temperature homogeneity in space</th>
<th>Heat compensation at 23°C</th>
<th>Heat compensation at 2°C</th>
<th>Temperature &amp; humidity control range</th>
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<tbody>
<tr>
<td>ARS/ARGF-0250-15</td>
<td>249</td>
<td>600x830x500</td>
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<td>+180</td>
<td>18.0</td>
<td>18.0</td>
<td>±0.3</td>
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<td>6000</td>
<td>4900</td>
<td>*Refer to diagram 5</td>
</tr>
<tr>
<td>ARS/ARGF-0400-15</td>
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<td>600x830x800</td>
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<td>5900</td>
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<tr>
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<td>1000x980x800</td>
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<td>+180</td>
<td>15.0</td>
<td>15.0</td>
<td>±0.5</td>
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<td>TCC-150W</td>
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<td>+180</td>
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<td>±0.5</td>
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<td>---</td>
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<td>8000</td>
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</table>

1: Discontinuously
2: Temperature change in the temperature range excluding ±10% of max/min temperature.
3: Reference data (not guaranteed data)

### PERFORMANCES FOR CLIMATIC TESTS

**Temperature & humidity control range**

### Diagrams

- **Diagram 4**: Shows the relative humidity (%) over temperature (°C) with 3%±3% precision in 25°C to 85°C, 70% ±5% to 98% ±5%, 0°C to 60°C and 70% ±5% to 95% ±5%.
- **Diagram 5**: Shows the relative temperature (%) over temperature (°C) with 3%±3% precision in 0°C to 60°C and 5% ±5% to 95% ±5%.

* With no specimen and under ambient temperature at ±23°C.
* Continuous operation at or below -40°C is limited because of frost formation on the cooler and dehumidifier.
### Test standards and compatible models at a glance

<table>
<thead>
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<tbody>
<tr>
<td><strong>With temperature-changing speed of 1K/min and 2K/min</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SH/SU-242/262/642/662</td>
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<tr>
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<tr>
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The test results may not meet specifications depending on the quantity of specimens or the setting method.
<table>
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<th>IEC-60068-2-14:2001 (40°C ±5°C, 40%RH-80%RH)</th>
<th>IEC-60068-2-14:2001 (40°C ±5°C, 40%RH-80%RH)</th>
<th>ISO 16750-4 Part 4: Climatic loads</th>
<th>5.3 Temperature cycling tests</th>
<th>ISO 16750-4: Road Vehicles 5.3.2.2 Test 1: Damp heat cyclic test</th>
<th>5.3.2.3 Test 2: Composite temperature/humidity cyclic test</th>
<th>5.6.2.4 Test 3: Dewing test</th>
<th>JESO.-A114B/AEC-Q100/Q2000</th>
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<tbody>
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<td>✓ (SH)</td>
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<td>✓</td>
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</tr>
</tbody>
</table>
Special Features

Bench Top Type
Temperature (& Humidity) Chamber

High Performance
-60°C ~ +150°C

Compact design
- Stackable with optional rack
- Volume 22.5L / 64L

Simple Monitoring

By connecting a chamber in your network group, you can monitor the status of the chamber by browser. A specific application is not required.

Centralized Control Monitor
(sold separately : ESPEC Online core)

You can observe current operating status of all test equipment by one computer in real-time.
Customized Testing
We offer years of experience in customized chambers. We can meet your individual specifications.

- Wide Viewing Door
  clear view at -40°C

- Road Vehicle Testing

- Training Room for Athletes
  low oxygen