Rapid-Rate Thermal Cycle Chamber
TCC-151W

Specifications are subject to change without notice due to design improvements.

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A thermal cycle chamber that achieves a temperature change rate of 23°C/min. and specimen temperature ramp control of 15°C/min.

Used for everything from JEDEC standard testing to screening, this rapid-rate thermal cycle chamber rapidly changes air temperature while controlling specimen temperature. It features a built-in web application that can be used to operate the chamber from a PC or tablet. This web application allows you to check the status of the chamber remotely using a web browser.

* Temp. rate of change according to IEC 60068-3-5
* Set conditions: +180°C, −70°C
For accurate life evaluation testing that meets JEDEC standard

Highly reproducible ramp control

Using the TCC specimen temperature ramp control, the ramp rate can be regulated so that strain waveforms can be symmetrical. Furthermore, the strain rate can be held constant even if the number of samples is different per test, by maintaining the same ramp rate. This allows tests to be carried out with exceptionally high reproducibility.

Meet JESD22-A104E

Standard tests that require specimen temperature ramp rates of 15 °C per minute or less (−40 to +125 °C) can be carried out with ease and accuracy. In addition, this chamber is also designed to execute tests at a temperature change rate of 10 to 15 °C per minute as stated in IEC60749-25 and at 15 °C per minute mentioned in JESD22-A104E. This chamber is ideally suited to automotive test requirements, life assessments for solder joints, and reliability assessments for semiconductor devices and packages.

Maximized temperature uniformity for equal thermal load to the specimen

Fatigue life depends on the rate of strain and the strain waveform. In the case of thermal cycle chambers, the strain rate fluctuates based on the temperature change rate, while the strain waveform is influenced by the symmetry of the specimen temperature change waveform during temperature increase and decrease.
Performance

- **Dual-side wiring for enhanced operability**
  The chamber comes with 25 × 100mm oval cable ports on both the left and right sides for the simple wiring of flat cables. The internal dimension of the chamber are W800 × H500 × D400 mm, and the capacity is 160 L.
  * Accommodates approximately 60 B5-sized (176 × 250 mm) boards in an upright position.

- **The integrated control panel on the door maximizes usable space inside the chamber.**

- **Specimen can be inserted or removed during testing**
  Testing can be paused upon completion of any given cycle. Specimen can be inserted or removed during testing, enabling joint testing to reduce overall test time.

- **Conductor resistance evaluations**
  The TCC can be used in conjunction with the Espec Resistance Evaluation System (AMR) (sold separately) used for continuous measurement of micro resistance of conductor components, such as solder joints under temperature cycle conditions, allowing for real-time detection of micro-crack formation.
  In addition, effective scheduling management has been facilitated by the integration of automatic measurement and data logging systems.

- **Complies with international safety standards**
  ISO 12100, Safety of machinery
  IEC 60204-1, Low voltage
  EMC IEC 61000-6-2, 6-4
High-resolution 7-inch display

- **Ramp rate input available (patent pending)**
  The step time can be calculated automatically just by inputting the ramp rate.

- **Convenient notification function**
  INFO icon flashes to show chamber information, such as door ajar alarm and whatever you select.

- **Multi-language support**
  You can change the language of the controller by pressing the Language icon and choosing the language. You can select from Japanese, English, Traditional Chinese, Simplified Chinese, and Korean.

- **Test profile copying without a PC**
  The chamber comes with a USB port that can be used with USB memory devices (not included) to share test profiles with other chambers.

*Some items may not be copied between different models chambers with different options.*
Test-supporting network functions

- **Remote monitoring and control (via Ethernet connection)**
  The chamber is equipped with a web application that enables monitoring of the chamber status and operation from a web browser, which ensures operability from a remote location. Passwords for user-level access can also be set using the web browser.

- **Editing test profiles via a browser**
  It is possible to edit the test profiles registered in the chamber using a web browser.

- **Email alarm notification**
  Details on alarms that have been triggered will be sent to pre-registered e-mail addresses. It is also possible to transmit e-mails when testing has finished.
  *An Intranet environment is required to transmit e-mails.

Centralized management of environmental test chambers and peripheral devices

**ESPEC OnlineCore**

OnlineCORE (sold separately)

Operating status can be quickly ascertained via a web browser just by connecting to an Intranet environment. This enables chambers to be managed centrally to enable speedy maintenance, etc.

* Inquire regarding types of models that can be connected.
# SPECIFICATIONS

<table>
<thead>
<tr>
<th>Model</th>
<th>TCC-151W</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>System</strong></td>
<td>Balanced Temperature Control system (BTC system)</td>
</tr>
<tr>
<td><strong>Performance</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Temperature range</strong></td>
<td>$-70$ to $+180^\circ C$ ($-94$ to $+356^\circ F$)</td>
</tr>
<tr>
<td><strong>Temperature fluctuation</strong></td>
<td>$\pm 0.5^\circ C$ after temperature stabilization</td>
</tr>
<tr>
<td><strong>Specimen</strong></td>
<td>None None None None Yes $^3$</td>
</tr>
<tr>
<td><strong>Control target</strong></td>
<td>Chamber temp. Chamber temp. Chamber temp. Chamber temp. Chamber temp. or Specimen temp.</td>
</tr>
<tr>
<td><strong>Ramp control</strong></td>
<td>Off Off Off Off On</td>
</tr>
<tr>
<td><strong>Performance</strong></td>
<td>$23^\circ C / \text{min.}$ $18^\circ C / \text{min.}$ $26^\circ C / \text{min.}$ $20^\circ C / \text{min.}$ $15^\circ C / \text{min.}$</td>
</tr>
<tr>
<td><strong>Allowable heat load</strong></td>
<td>$8 \text{ kW} (-20^\circ C \text{ or more})$</td>
</tr>
<tr>
<td><strong>Exterior material</strong></td>
<td>Cold-rolled rust-proofed steel plate</td>
</tr>
<tr>
<td><strong>Interior material</strong></td>
<td>18-8 Cr-Ni Stainless steel plate</td>
</tr>
<tr>
<td><strong>Insulation</strong></td>
<td>Chamber body: Foamed polyurethane, glass wool Door: Glass wool, formed resin</td>
</tr>
<tr>
<td><strong>Door</strong></td>
<td>Single door (hinge on left, handle on right)</td>
</tr>
<tr>
<td><strong>Heater</strong></td>
<td>Nichrome strip wire heater</td>
</tr>
<tr>
<td><strong>Refrigeration unit</strong></td>
<td>Mechanical cascade refrigeration system (water-cooled condenser)</td>
</tr>
<tr>
<td><strong>Compressor</strong></td>
<td>Scroll-type</td>
</tr>
<tr>
<td><strong>Expansion system</strong></td>
<td>Electronic expansion valve</td>
</tr>
<tr>
<td><strong>Refrigerant</strong></td>
<td>R404A, R23</td>
</tr>
<tr>
<td><strong>Cooler</strong></td>
<td>Plate fin cooler</td>
</tr>
<tr>
<td><strong>Air circulator</strong></td>
<td>Sirocco fan</td>
</tr>
<tr>
<td><strong>Chamber total load resistance</strong></td>
<td>$50 \text{ kg}$</td>
</tr>
<tr>
<td><strong>Inside dimensions</strong> $^4$</td>
<td>$W800 \times H500 \times D400 \text{ mm}$</td>
</tr>
<tr>
<td><strong>Outside dimensions</strong> $^4$</td>
<td>$W1000 \times H1808 \times D1915 \text{ mm}$</td>
</tr>
<tr>
<td><strong>Capacity</strong></td>
<td>$160 \text{ L}$</td>
</tr>
<tr>
<td><strong>Weight</strong></td>
<td>$950 \text{ kg}$</td>
</tr>
<tr>
<td><strong>Allowable ambient conditions</strong></td>
<td>$+5$ to $+35^\circ C (+41$ to $+95^\circ F)$</td>
</tr>
<tr>
<td><strong>Power supply</strong></td>
<td></td>
</tr>
<tr>
<td>$200V \text{ AC } 3 \phi \text{ 50/60Hz}$</td>
<td>$115A$</td>
</tr>
<tr>
<td>$220V \text{ AC } 3 \phi \text{ 60Hz}$</td>
<td>$111A$</td>
</tr>
<tr>
<td>$380V \text{ AC } 3 \phi \text{ 50Hz}$</td>
<td>$61A$</td>
</tr>
<tr>
<td>$400V \text{ AC } 3 \phi \text{ 50Hz}$</td>
<td>$60A$</td>
</tr>
<tr>
<td><strong>Cooling water supply pressure</strong> $^6$</td>
<td>$0.2$ to $0.5 \text{ Mpa (2 to 5 kg/cm}^2\text{G})$</td>
</tr>
<tr>
<td><strong>Cooling water supply rate</strong> $^6$</td>
<td>$4100L/h$ (at reference water temp. $+25^\circ C$)</td>
</tr>
<tr>
<td><strong>Piping connection size</strong></td>
<td>Carbon steel pipe, ID $32 \text{ mm}$ (drain and supply)</td>
</tr>
<tr>
<td><strong>Operating cooling water temp. range</strong></td>
<td>$+5$ to $+32^\circ C (+41$ to $+89.6^\circ F)$</td>
</tr>
<tr>
<td><strong>Noise level</strong> $^7$</td>
<td>Max. $65 \text{ dB}$</td>
</tr>
</tbody>
</table>

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$^1$ The performance values are based on IEC60068-3-5:2006, and JTM K07:2007, under the conditions of a $+23^\circ C$ ambient temperature, cooling water temperature $+25^\circ C$, rated voltage, and no specimen.

$^2$ Refer to Fig on page 8.

$^3$ Specimen: (glass epoxy PCB) $5$kg + Jig: $4$kg (ESPEC standard jig)

$^4$ Excluding protrusions.

$^5$ Rate depends on the cleanliness of the heat exchanger

$^6$ A pressure regulator valve is required if the pressure exceeds $0.5\text{MPa (5kg/cm}^2\text{G})$

$^7$ Noise level was measured in an anechoic room at a height of $1.2 \text{ m}$ from the floor and a distance of $1 \text{ m}$ from the chamber front panel (JIS-Z-8731:1999 A-weighted sound pressure level).
### TEMPERATURE CHANGE GRAPH

- **Temperature range:**
  - -45 to +155°C (setting: -70, +180°C)
  - +155 to -45°C (setting: +180, -70°C)

- **Specimen load:** None
- **Temperature control:** Chamber temperature
- **Ramp control:** Off
- **Performance:**
  - Max. 9 min. (32°C or more/min.)
  - Max. 11 min. (18°C or more/min.)

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### DIMENSIONS/FITTINGS LOCATION

- **Unit:** mm

- **Ethernet port (LAN port)**
- **Specimen power supply control terminal**
- **Time signal x 2**
- **Specimen temperature input terminal**

- **Power supply cable port**
- **Overheat protector**
- **Cable port φ25×100mm, right & left side**
- **USB port**

- **Drain pipe for cooling water**
- **Water supply pipe for cooling water**

- **DIMENSIONS:**
  - **Width:** 1915 mm
  - **Depth:** 1000 mm
  - **Height:** 1808 mm
SAFETY DEVICES

- Leakage breaker for 200, 220, 380V AC supply
- Circuit breaker for 400V AC supply
- Mechanical compartment cover and electrical compartment door switch
- Thermal fuse for control circuit short-circuit protection
- System error
- Motor reverse prevention relay
- Thermal fuse
- Air circulator short-circuit protection
- Air circulator Thermal switch
- Overheat protector
- Temp upper limit deviation alarm
- Temp upper / lower limit absolute alarm
- Chamber door switch
- Room temperature compensation burn-out detection circuit
- Dry bulb temperature burn-out detection circuit
- Product temperature burn-out detection circuit (only when product temperature control)
- Specimen power supply control terminal
- Cooling water pressure switch
- Heater overcurrent protection
- Refrigeration circuit temperature burn-out detection circuit
- Refrigerator short-circuit protection
- Refrigerator overcurrent protection
- Refrigerator high/low pressure switch
- Cooling tower interlock terminal

ACCESSORIES

- Flat cable port rubber plug (Silicone sponge rubber) — 2
- Specimen basket — 2
  (18-8 Cr-Ni stainless steel: 5 mesh per inch)
  W700 × H40 × D346 mm/ load capacity 5kg

- Shelf brackets (7 positions available, pitch 60mm) — 4
- Cartridge fuse
  200V AC
  Type B, 250V 6A — 1
  250V 4A — 1
  220V AC, 380V AC, 400V AC
  Type B, 250V 4A — 1
  250V 5A — 1
  250V 6A — 1
- Specimen temperature measuring thermocouple — 1
- Specimen temperature input connector — 1
- Strainer R1 1/4 in. (32A) — 1
- Nipple R1 1/4 in. (32A) — 1
- Strainer element (#30 mesh) — 1
- Operation manual — 1 set
- Warranty card — 1

*Power cable is optional, not equipped as standard fitting.

Safety precautions

- Do not use specimens which are explosive or inflammable, or which contain such substances. To do so could be hazardous, as this may lead to fire or explosion.
- Do not place corrosive materials in the chamber. If corrosive substances or liquid is used, the life of the unit may be significantly shortened specifically because of the corrosion of stainless steel, resin and silicone materials.
- Do not place life forms or substances that exceed allowable heat generation.
- Be sure to read the operation manual before operation.
## TEST STANDARD (TCC-151W COMPATIBILTY)

<table>
<thead>
<tr>
<th>Test standard</th>
<th>Temperature setting</th>
<th>Temperature change rate</th>
<th>Soak time</th>
<th>Number of cycles</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>JESD22-A104E</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>G</td>
<td>+125 (+15, −0)</td>
<td>−40 (+0, −10)</td>
<td>Specimen temperature, 15°C / min. or less</td>
<td>1, 5, 10, 15 min.</td>
</tr>
<tr>
<td>I</td>
<td>+115 (+15, −0)</td>
<td>−40 (+0, −10)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>J</td>
<td>+100 (+15, −0)</td>
<td>0 (+0, −10)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>K</td>
<td>+125 (+15, −0)</td>
<td>0 (+0, −10)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>L</td>
<td>+110 (+15, −0)</td>
<td>−55 (+0, −10)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>+80 (+15, −0)</td>
<td>−40 (+0, −10)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R</td>
<td>+125 (+15, −0)</td>
<td>−25 (+0, −10)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>IEC 60749-25</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>G</td>
<td>+125 (+15, −0)</td>
<td>−40 (+0, −10)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I</td>
<td>+115 (+15, −0)</td>
<td>−40 (+0, −10)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>J</td>
<td>+100 (+15, −0)</td>
<td>0 (+0, −10)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>K</td>
<td>+125 (+15, −0)</td>
<td>0 (+0, −10)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>L</td>
<td>+110 (+15, −0)</td>
<td>−55 (+0, −10)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>+80 (+15, −0)</td>
<td>−30 (+0, −10)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>O</td>
<td>+125 (+15, −0)</td>
<td>−25 (+0, −10)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>IEC 60068-2-14 Nb (JIS C 60068-2-14 Nb)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>+175 ± 2</td>
<td>+155 ± 2</td>
<td>+125 ± 2</td>
<td>+100 ± 2</td>
</tr>
<tr>
<td><strong>IEC-61747-5 (EIAJ ED-2531B)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>+100 ± 2</td>
<td>+95 ± 2</td>
<td>+90 ± 2</td>
<td>+85 ± 2</td>
</tr>
<tr>
<td><strong>JESD22-A105C</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>+85 (+10, −0)</td>
<td>−40 (+0, −10)</td>
<td>6.25°C / min.</td>
<td>10 min.</td>
</tr>
<tr>
<td>B</td>
<td>+125 (+10, −0)</td>
<td>−40 (+0, −10)</td>
<td>5.5°C / min.</td>
<td></td>
</tr>
<tr>
<td><strong>IPC-9701</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TC1</td>
<td>100</td>
<td>0</td>
<td>Specimen temperature, 20°C / min. or less</td>
<td>Specimen temperature, 10 min.</td>
</tr>
<tr>
<td>TC2</td>
<td>100</td>
<td>−25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TC3</td>
<td>125</td>
<td>−40</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TC4</td>
<td>125</td>
<td>−55</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TC5</td>
<td>100</td>
<td>−55</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>IPC-TM-650 2.6.6</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>+125 (+3, −0)</td>
<td>−65 (+0, −5)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>+85 (+3, −0)</td>
<td>−55 (+0, −5)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>LV 124 L-03</strong></td>
<td></td>
<td></td>
<td>4°C / min.</td>
<td>15 min.</td>
</tr>
<tr>
<td><strong>SAE-J1211</strong></td>
<td></td>
<td></td>
<td>4 to 6°C / min.</td>
<td></td>
</tr>
</tbody>
</table>

### Notes
- **TC1** and **TC2** are temperature control settings.
- **IPC-9701** includes two different temperature control standards: TC1 and TC2.
- **IPC-TM-650 2.6.6** provides different control ranges for different temperature levels.
- **LV 124 L-03** specifies specific temperature control settings for different time periods.
- **SAE-J1211** outlines temperature control settings for specific conditions.
### OPTIONS

<table>
<thead>
<tr>
<th>Power cable</th>
<th>Additional cable port</th>
<th>Paperless recorder</th>
</tr>
</thead>
<tbody>
<tr>
<td>- 5 m</td>
<td>Provided in addition to the standard cable ports. (Right &amp; left sides)</td>
<td>Records temperature of each section such as the temperature inside the chamber.</td>
</tr>
<tr>
<td>- 10 m</td>
<td>Location: Right &amp; left side of the main unit</td>
<td>Display: 5.7inch color touch panel</td>
</tr>
<tr>
<td>* Power cable is optional, not equipped as standard fitting.</td>
<td>Internal diameter: $\phi \times 100$ mm</td>
<td>Number of inputs (Initial setting):</td>
</tr>
<tr>
<td></td>
<td>* This cable port cannot be retrofitted on the field.</td>
<td>2 (4 more channels can be turned ON)</td>
</tr>
</tbody>
</table>

### Specimen basket / shelf bracket

Equivalent to standard accessory.
- Material: Stainless steel (5 mesh)

![Specimen basket](image)

### Interface

- RS-485
- RS-232C
- GPIB

Location: Terminal panel

### Communication cables

- RS-485 5m/10m/30m
- GPIB 2m/4m

### Chart recorder

- 100 to $+220^\circ C$ /100 mm
- RK-63: 3 pens
- RK-64: 6 dots

### Recorder wiring

Preparation of a power cable, temperature sensor, and a grounding wire for additional installation in the future.

### Recorder terminal

Used to output the temperature within test area and specimen temperature.
**OPTIONS**

**Thermocouple**

Attached to specimens to measure specimen temperature.
- Thermocouple type T without ball (Copper/ Copper-Nickel)
  * Same as accessory items

**Temperature attainment output**

When the temperature in the chamber reaches the set values, the chamber sends out a contact signal.

**Additional overheat protector**

Additional preventive measures can be taken for excessive temperature rise in the chamber, in addition to the standard equipped overheat protector.

**Overcool protector**

If the temperature inside the chamber decreases excessively, the chamber stops operating to prevent the specimens from being damaged.

**Door opening signal output terminal**

Equips the chamber with a terminal that outputs the door open status. Capable of controlling an external device that operates along with door operation and records the temperature disturbance history.

**Status output terminal**

When the chamber is setting operation such as “Error”, interlock with connecting devices.

Operation:
- When connecting with N.O. contact (normally open contact), output “close” contact.
- When connecting with N.C. contact (normally close contact), output “open” contact.

Power supply capacity: 250 V AC, 3 A
Accessory: Plug
Location: Terminal panel
Right side or within the control board (retrofit is not available)
*The circuit shall be connected by customer.

**Status indicator light**

Select light color, lighting, and blinking or buzzer sound.
- 1 level, light: 1 color, height: 534 mm
- 2 levels, light: 2 colors, height: 574 mm
- 3 levels, light: 3 colors, height: 614 mm
- 4 levels, light: 4 colors, height: 654 mm

Pole length: 290 mm
* The pole can be shortened in units of 10 mm to a minimum height of 50 mm.

**Anchoring fixtures**

Used to bolt the chamber to the floor.

**Chamber dew tray**

Prevents water leaks from the chamber onto the floor.

**Casters**

Installed for mobility.
Casters: 4
Levelling-feet: 4

**Operation manual**

- CD
- Booklet

**Reports & certificates**

- Testing and inspection report
- Test data
- Calibration report
- Calibration certificate
- Traceability certificate
- Traceability system chart

*To prevent damage in the event of water leakage, other preventive measures are also available.*

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Some photographs presented in this catalog contain Japanese display.
ARGF

Model | ARGF-0250-15 | ARGF-0400-15 | ARGF-0800-15
---|---|---|---
Temperature range | −70 to +180℃ (−94 to +356℉) | | |
Temperature fluctuation | ±0.3K | | |
Temp. rate of change | Heat up rate: 18K/min. | 15K/min. | 15K/min.
Pull down rate: 18K/min. | 15K/min. | 15K/min. |
Allowable heat load | Test area temperature: +20℃ |
Capacity | 6000W | 9000W |
Inside dimensions mm | W600×H830×D500 | W600×H830×D800 | W1000×H980×D800 |
Outside dimensions mm | W800×H1703×D1900 | W800×H1703×D2200 | W1200×H1853×D2200 |

*1: Temperature and humidity models also available.

*2: The performance values are based on IEC60068-3-5:2001 and IEC60068-3-6:2001; Performance figures are given for a +23°C, ambient temperature relative humidity of 65±20%rh, rated voltage, and no specimen inside the test area.

*3: Dimensions do not include protrusions.
**HRG**

<table>
<thead>
<tr>
<th>Model*1</th>
<th>HRG-357HS-20</th>
<th>HRG-600HS-20</th>
<th>HRG-800HS-20</th>
<th>HRG-1800HS-20</th>
<th>HRG-357HS-25</th>
<th>HRG-600HS-25</th>
<th>HRG-800HS-25</th>
<th>HRG-1800HS-25</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature range</td>
<td>−70 to +180°C (−94 to +356°F)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Temp. rate of change</td>
<td>Heat up rate</td>
<td>20K/min.</td>
<td>25K/min.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Pull down rate</td>
<td>20K/min.</td>
<td>25K/min.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inside dimensions (W x H x D mm) *2</td>
<td>700 x 850 x 600</td>
<td>1000 x 1000 x 600</td>
<td>1000 x 1000 x 800</td>
<td>1500 x 1200 x 1000</td>
<td>700 x 850 x 600</td>
<td>1000 x 1000 x 600</td>
<td>1000 x 1000 x 800</td>
<td>1500 x 1200 x 1000</td>
</tr>
<tr>
<td>Capacity</td>
<td>357L</td>
<td>600L</td>
<td>800L</td>
<td>1800L</td>
<td>357L</td>
<td>600L</td>
<td>800L</td>
<td>1800L</td>
</tr>
</tbody>
</table>

*1: Temperature and humidity models also available.

*2 Dimensions do not include protrusions.
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