Temperature Control Baths

Temperature Bath Systems combine state-of-the-art controller displays with high performance circulating baths to give accurate viscosity test results.

### Temperature Baths Features

<table>
<thead>
<tr>
<th>MODEL</th>
<th>Temperature Range Low</th>
<th>Temperature Range High</th>
<th>Controller</th>
<th>Code</th>
<th>Temperature Stability</th>
<th>Digital Type/Resolution</th>
<th>Reservoir Capacity</th>
<th>Pump Speed</th>
<th>Maximum Flow Rate</th>
<th>Internal Water Volume (inches)</th>
<th>Overall Dimension (inches)</th>
<th>Weight (lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TC-650AP</td>
<td>-20°C</td>
<td>+200°C</td>
<td>AP</td>
<td>Refrigerated</td>
<td>0.01°C</td>
<td>0.01 / 0.001</td>
<td>7.0 liters</td>
<td>Variable</td>
<td>16 LPM</td>
<td>6.18 x 5.59 x 5.0</td>
<td>21.3 x 8.7 x 24.3</td>
<td>90 lbs</td>
</tr>
<tr>
<td>TC-650SD</td>
<td>-20°C</td>
<td>+170°C</td>
<td>SD</td>
<td>Refrigerated</td>
<td>0.04°C</td>
<td>0.1 / 0.1</td>
<td>7.0 liters</td>
<td>2-speed</td>
<td>11 LPM</td>
<td>6.18 x 5.59 x 5.0</td>
<td>21.3 x 8.7 x 24.3</td>
<td>90 lbs</td>
</tr>
<tr>
<td>TC-650MX</td>
<td>-20°C</td>
<td>+135°C</td>
<td>MX</td>
<td>Refrigerated</td>
<td>0.07°C</td>
<td>0.1 / 0.1</td>
<td>7.0 liters</td>
<td>1-speed</td>
<td>12 LPM</td>
<td>6.18 x 5.59 x 5.0</td>
<td>21.3 x 8.7 x 25.4</td>
<td>84 lbs</td>
</tr>
<tr>
<td>TC-550AP</td>
<td>-20°C</td>
<td>+200°C</td>
<td>AP</td>
<td>Refrigerated</td>
<td>0.01°C</td>
<td>0.01 / 0.001</td>
<td>7.0 liters</td>
<td>Variable</td>
<td>16 LPM</td>
<td>6.18 x 5.59 x 5.0</td>
<td>23.2 x 16.2 x 16.2</td>
<td>90 lbs</td>
</tr>
<tr>
<td>TC-550SD</td>
<td>-20°C</td>
<td>+170°C</td>
<td>SD</td>
<td>Refrigerated</td>
<td>0.04°C</td>
<td>0.1 / 0.1</td>
<td>7.0 liters</td>
<td>2-speed</td>
<td>11 LPM</td>
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<td>90 lbs</td>
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<tr>
<td>TC-550MX</td>
<td>-20°C</td>
<td>+135°C</td>
<td>MX</td>
<td>Refrigerated</td>
<td>0.07°C</td>
<td>0.1 / 0.1</td>
<td>7.0 liters</td>
<td>1-speed</td>
<td>12 LPM</td>
<td>6.18 x 5.59 x 5.0</td>
<td>23.2 x 16.2 x 17.3</td>
<td>84 lbs</td>
</tr>
<tr>
<td>TC-250AP</td>
<td>ambient +10°C</td>
<td>+150°C</td>
<td>AP</td>
<td>Tap Water</td>
<td>0.01°C</td>
<td>0.01 / 0.001</td>
<td>10.0 liters</td>
<td>Variable</td>
<td>16 LPM</td>
<td>5.0 x 11.0 x 6.0</td>
<td>13.9 x 13.5 x 14.9</td>
<td>45 lbs</td>
</tr>
<tr>
<td>TC-250SD</td>
<td>ambient +10°C</td>
<td>+150°C</td>
<td>SD</td>
<td>Tap Water</td>
<td>0.04°C</td>
<td>0.1 / 0.1</td>
<td>10.0 liters</td>
<td>2-speed</td>
<td>11 LPM</td>
<td>5.0 x 11.0 x 6.0</td>
<td>13.9 x 13.5 x 14.9</td>
<td>45 lbs</td>
</tr>
<tr>
<td>TC-250MX</td>
<td>ambient +10°C</td>
<td>+150°C</td>
<td>MX</td>
<td>Tap Water</td>
<td>0.07°C</td>
<td>0.1 / 0.1</td>
<td>10.0 liters</td>
<td>1-speed</td>
<td>12 LPM</td>
<td>5.0 x 11.0 x 6.0</td>
<td>13.9 x 13.5 x 16.0</td>
<td>39 lbs</td>
</tr>
<tr>
<td>TC-150AP</td>
<td>ambient +10°C</td>
<td>+150°C</td>
<td>AP</td>
<td>Tap Water</td>
<td>0.01°C</td>
<td>0.01 / 0.001</td>
<td>6.0 liters</td>
<td>Variable</td>
<td>16 LPM</td>
<td>4.5 x 4.0 x 6.0</td>
<td>13.4 x 8.1 x 14.9</td>
<td>26 lbs</td>
</tr>
<tr>
<td>TC-150SD</td>
<td>ambient +10°C</td>
<td>+150°C</td>
<td>SD</td>
<td>Tap Water</td>
<td>0.04°C</td>
<td>0.1 / 0.1</td>
<td>6.0 liters</td>
<td>2-speed</td>
<td>11 LPM</td>
<td>4.5 x 4.0 x 6.0</td>
<td>13.4 x 8.1 x 14.9</td>
<td>26 lbs</td>
</tr>
<tr>
<td>TC-150MX</td>
<td>ambient +10°C</td>
<td>+150°C</td>
<td>MX</td>
<td>Tap Water</td>
<td>0.07°C</td>
<td>0.1 / 0.1</td>
<td>6.0 liters</td>
<td>1-speed</td>
<td>12 LPM</td>
<td>4.5 x 4.0 x 6.0</td>
<td>13.4 x 8.1 x 16.0</td>
<td>20 lbs</td>
</tr>
<tr>
<td>TC-351</td>
<td>-20°C</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>14.0 x 14.0 x 14.0</td>
<td>72 lbs</td>
<td></td>
</tr>
</tbody>
</table>

* For use at lower temperatures, use the built-in tap water cooling, or use model TC-351 Cooler for control to -20°C.
† Low temperature limit 10°C above ambient unless external cooling is used.
‡ Temperature stability may vary depending on bath volume, surface area, insulation and type of fluid.

**AP Series Controllers**
- Color touch-screen interface
- Standalone programmable or PC control with RheocalcT software
- Variable-speed pump
- Max. temperature up to 200°C
- Multiple languages (English, French, German, Spanish, Chinese available)
- Built-in help menu

**SD Series Controllers**
- Best value
- Programmable with PC control using RheocalcT software
- Quick scroll to set temperature in standalone mode
- 2-speed pump
- Maximum temperature up to 170°C

**MX Series Controllers**
- Economical
- Large character display
- Single-speed pump
- Maximum temperature up to 135°C

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Step 1: Choosing the controller

**CHOOSE THE ONE THATBEST SUITS YOUR APPLICATION**

- Choose the controller by considering factors such as the need for PC control using RheocalcT with DV2T or DV3T, ease of use, pump speed, and foreign language choices (AP series controller only).

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All controllers are swivel-mounted so that user can adjust position for optimum viewing angle.
**Step 2: Choosing the bath**

*CHOOSE THE CIRCULATING BATH THAT MEETS YOUR NEEDS*

Determine the type of circulating bath needed by considering temperature range, cooling requirements, reservoir capacity, flow speeds and built-in drains (Models TC-550 and TC-650).

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**TC-550**

**Circulating Water Bath Refrigerated**

- PC control capable with RheocalcT software

Most popular choice with widest temperature control capability
- 7-liter reservoir capacity
- Configured to measure viscosity directly in the bath or circulate to external water-jacketed devices**
- Accommodates one 600 mL beaker
- Provides stand-alone operation with no tap water required and easy control of set-point
- Available with MX, SD or AP Controllers
- Automated sample temperature control available with SD and AP Controllers

**TC-650**

**Circulating Water Bath Refrigerated**

- PC control capable with RheocalcT software

Compact — small “footprint” on your lab bench or can be placed underneath lab bench
- 7-liter reservoir capacity
- Specifically designed for circulating to external water-jacketed devices**
- Accommodates one 600 mL beaker
- Provides stand-alone operation with no tap water required and easy control of set-point
- Available with MX, SD or AP Controllers
- Automated sample temperature control available with SD and AP Controllers

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*Provided tap water temperature is 15°C or lower

**All baths can be used with Brookfield water-jacketed devices; Wells-Brookfield Cone/Plate Viscometer, R/S-CC and R/S-CPS Rheometers and Small Sample Adapter, Ultra-Low Adapter and DIN Adapter accessories*
**TC-150**

Circulating Water Bath Non-Refrigerated

- Compact – smallest “footprint” available
- 6-liter reservoir capacity
- Removable deck lid accommodates one 600 mL beaker to measure viscosity directly in the bath
- Tap water cooling coil for temperature control at 25°C*
- Built-in circulator pump for use with external water-jacketed devices**
- Available with MX, SD or AP Controller

**TC-250**

Circulating Water Bath Non-Refrigerated

- Largest work area available for conditioning multiple samples directly in the bath
- 10-liter reservoir capacity
- Accommodates 600 mL and 1000 mL beakers (cover is removable for large sample container requirements)
- Built-in tap water cooling coil for temperature control at 25°C*
- Built-in circulator pump for use with external water-jacketed devices**
- Available with MX, SD or AP Controller

**TC-351**

Cooler (not shown) for use with TC-150 & TC-250 Circulating Baths

- Eliminates tap water requirements on non-refrigerated baths
- Increases lower range of most baths to –20°C

**Step 3: Comparing bath features**

Once you’ve familiarized yourself with the Brookfield Circulating Water Bath Series you can easily compare models to find the bath that best suits your requirements.

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**Water Bath Accessories**

- **Algicide** 8 oz.
  - TC-Fluid 1A
  - Keeps circulator baths clean, odor free and resists black algae
- **50/50 Premix Ethylene Glycol** 1 gal.
  - TC-Fluid 2 -20°C to +100°C
  - Ethylene glycol 1:1 solution, ready to use
- **High Temperature Fluid** 1 gal.
  - TC-Fluid 3 +50°C to +150°C
  - TC-Fluid 4 +100°C to +200°C
  - PVS-152 +25°C to +200°C
  - These heat transfer fluids provide superior thermal stability
- **Low Temperature Fluid** 1 gal.
  - TC-Fluid 5 -50°C to +58°C
  - Excellent low temperature performance
  - Little or no evaporation
- **Bath Cleaner** 8 oz.
  - TC-Fluid 6A
  - Removes rust and mineral deposits
  - Concentrated liquid
- **18” Lab Stand Rod**
  - VS-CRA-18S
  - Designed for increasing viscometer height when measuring in a TC-150, TC-250 or TC-550 Bath

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**ISO 9001:2008 CERTIFIED**

**BROOKFIELD AMETEK**

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