Temperature Control with Baths

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

All controllers are swivel-mounted so that user can adjust position for optimum viewing angle

Step 1: Choosing the controller

CHOOSE THE ONE THAT BEST 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).

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

Temperature Baths Features

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

* 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

N/A - Not Applicable
FOR OPERATING TEMPERATURES HIGHER THAN 80°C, PLEASE CONTACT BROOKFIELD FOR BATH FLUID RECOMMENDATIONS.

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). Consult the chart on page 33 for specifications.

TC-550

PC control capable with RheocalcT software

Circulating Water Bath Refrigerated

Most popular choice with widest temperature control capability

Easily controls at 25°C for calibration checks

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

AP Controller shown

TC-650

PC control capable with RheocalcT software

Circulating Water Bath Refrigerated

Compact — small "footprint" on your lab bench or can be placed underneath lab bench

Easily controls at 25°C for calibration checks

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

*Provided tap water temperature is 15°C or lower

**All baths can be used with AMETEK 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

AP Controller shown

TEL 800-628-8139 or 508-946-6200 **FAX** 508-946-6262 **www.brookfieldengineering.com**

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

MX Controller shown

TC-250

PC control capable with RheocalcT software

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-jacket devices**

Available with MX, SD or AP Controller

SD Controller shown

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 AMETEK Brookfield Circulating Water Bath Series you can easily compare models to find the bath that best suits your requirements. Consult the chart on page 33 for all TC Series Model specifications.

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

Accessories

Additional benches for elevating the position of beakers, metal lids for anchoring beakers, hoses depending on temperature range, and deck lid covers are available. Contact us for details.