



Precision Calibration Baths

The Techne liquid calibration bath (LCB) series offer compact, accurate and reliable liquid baths for temperature calibration of thermal sensors.



- 35°C to 250°C
- Two different capacities available: 7 or 12 liters
- Temperature stability; $\pm 0.005^\circ\text{C}$ depending on choice of control unit
- Fully insulated bath for excellent heat retention
- Analog or digital temperature selection, depending on choice of control unit
- Includes cover, lid bridging plate, and cooling coil

When temperature calibration is required the compact liquid baths offers excellent stability over the entire temperature range. The LCBs can be also be used for external circulation to maintain temperatures of samples in viscometers, photometers, refractometers, fermenters and other reaction vessels.

All LCB systems offer exceptional thermal stability from -35°C to 250°C. The baths are fully insulated on all sides and base and are fitted with a cooling coil for connection to a cold water supply for use at temperatures around ambient. The minimum temperature achievable is -35°C when a Flow Cooler is added to the system.* For the full specifications of the thermoregulators (see pages 15 and 16).

Each bath is supplied complete with lid, drain tap, carry handles , a cooling coil and hole with bung to position a certified sensor.

The TechneWorks software package is available for the TU-20 thermoregulators free of charge from www.techneusa.com (see page 10 for details).

Technical Specifications

	7 liter	12 liter
Working depth L x W x H (cm)	17.5	30
Dimensions L x W x H (cm)	35.1 x 26 x 23.3	35.1 x 26 x 35.8
Thermoregulator L x W x H (cm)	23.7 x 12.4 x 26	23.7 x 12.4 x 26
Bath opening (cm)	14 x 14	14 x 14

Ordering Information

Product Code	Description
3022300	LCB insulated liquid calibration bath with cooling coil, 7 liter capacity
3022400	LCB insulated liquid calibration bath with cooling coil, 12 liter capacity

*LCB baths fitted with a TU-20HT thermoregulator are not suitable for use with a Flow Cooler.

Liquid Calibration Bath	LCB-7/12	LCB-7/12
Thermoregulator	TU-20D	TU-20HT
Bath Capacity	7 / 12 liters	7 / 12 liters
Operating temperature range ¹	-35 to 200°C	Ambient +10 to 250
Working temperature range ²	25 to 200°C	30 to 250
Stability at -35°C (short term*)	+/-0.015	N/A
Stability at 0°C (short term*)	+/-0.020	N/A
Stability at 50°C (short term*)	+/-0.005	+/-0.005
Stability at 100°C (short term*)	+/-0.015	+/-0.015
Stability at 200°C (short term*)	+/-0.024	+/-0.024
Stability at 250°C (short term*)	N/A	+/-0.040
Uniformity °C (full range**)	0.008	0.008
Accuracy °C (full range)	+/-0.5	+/-0.5

1) With an FC-500 flow cooler;

2) Ambient of 20°C

*Stability is over a 15 minute period.

**Two SPRT's 3" apart in the working area of bath



TU-20D Tempunit®

- A wider temperature range of -40°C* to 200°C
- Excellent temperature stability: $\pm 0.005^\circ\text{C}$ at 40°C
- 4 digit setting with a bright LED digital temperature display
- This unit incorporates an RS232 connection
- User adjustable over-temperature cut-out
- Low liquid level cut-out as standard

TU-20HT Tempunit®

- This sophisticated Tempunit® covers a wide temperature range of -40°C* to 250°C
- Excellent temperature stability: $\pm 0.005^\circ\text{C}$ at 40°C
- 4 digit setting with a bright LED digital temperature display
- RS232 connection supplied with TechneWorks software package and connecting lead as standard
- User adjustable over-temperature cut-out with an audible alarm fitted
- Low liquid level cut-out as standard



TU-20D

Technical Specifications

Specifications to DIN 12876	TU-20D	TU-20HT
Temperature range *	-40°C to +200°C	-40°C to +250°C
Temperature selection	Digital	Digital
Temperature stability using water @ 40°C	$\pm 0.005^\circ\text{C}$	$\pm 0.005^\circ\text{C}$
Method of control	PID	PID
Temperature sensor	PRT	PRT
Adjustable over-temperature cut-out	Yes	Yes
Low liquid level cut-out	Yes	Yes
PC Interface	Yes RS232	Yes RS232
Heating/Pumping		
Pump capacity liters/minute	10	N/A internal circulation only
Pump capacity (mbar)	145	-
Nominal heater power at 120V (W)	1500	1500
Nominal heater power at 240V (W)	1800	1800
Cooling coil	Option	Option
Extension below base (cm)	14.5	14.5
Dimensions L x W x H (cm)	23.7 x 12.4 x 26	23.7 x 12.4 x 26
TechneWorks software package	TechneWorks#	TechneWorks#

* Refrigeration or cooling coil required for near or below ambient operation. (See Techne Flow and Dip Coolers and the cooling coil). The TU-20HT can only be used with the Dip Coolers.

See page 10 for details

Ordering Information

Product Code	Description
1016300	TU-20D, advanced thermoregulator with RS232, -40°C to 200°C, (supplied with clamp), 120V
1016800	TU-20D, advanced thermoregulator with RS232, -40°C to 200°C, (supplied with clamp), 240V
1017600	TU-20HT, advanced high temperature thermoregulator with RS232 and TechneWorks software, -40°C to +250°C, (supplied with clamp), 120V
1017650	TU-20HT, advanced high temperature thermoregulator with RS232 and TechneWorks software, -40°C to +250°C, (supplied with clamp), 240V



TU-20HT