

liquid temperature calibration baths



Liquid Calibration Baths

The Techne liquid calibration bath (LCB) series offer compact, accurate and reliable liquid baths which can be used for external circulation or temperature calibration of thermal sensors.

- -35°C to 250°C
- Three different capacities available; 5, 7 or 12 litres
- Temperature stability; ±0.005°C depending on choice of control unit
- Fully insulated bath for excellent heat retention
- Analogue or digital temperature selection, depending on choice of control unit
- Includes cover, lid and bridging plate

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 models of LCB 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 Dip or Flow Cooler is added to the system.* For the full specifications of the thermoregulators see pages 24 and 25.

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.techne.com (see page 11 for details).

Technical Specification

	5 litre	7 litre	12 litre
Working depth L x W x H (mm)	125	175	300
Dimensions L x W x H (mm)	351 x 260 x 183	351 x 260 x 233	351 x 260 x 358
Thermoregulator L x W x H (mm)	237 x 124 x 260	237 x 124 x 260	237 x 124 x 260
Bath opening (mm)	140 x 140	140 x 140	140 x 140

Ordering Information

Product	duct	
Code	Description	
FBCAL05D	LCB insulated liquid calibration bath with cooling coil, 5 litre capacity	
FBCAL07D	LCB insulated liquid calibration bath with cooling coil, 7 litre capacity	
FBCAL12D	LCB insulated liquid calibration bath with cooling coil, 12 litre capacity	

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

Liquid Calibration Bath	LCB-5/7/12	LCB-5/7/12
Thermoregulator	/TU-20D	/TU-20HT
Bath Capacity	5 / 7 /12 litres	5 / 7 / 12 litres
Operating temperature range ¹	-35 to 200°C	ambient +10 to 250°C
Working temperature range ²	25 to 200°C	30 to 250°C
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

^{*}Short term stability is over a 15 minute period, for 1 hour double the values shown

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

liquid temperature calibration baths



TU-20D Tempunit®

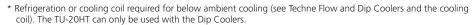
- A wider temperature range of -40°C* to 200°C
- Excellent temperature stability: ±0.005°C at 40°C
- 1.8kW heater power for fast heat up
- 4 digit setting with a bright LED digital temperature display
- This unit incorporates an RS232 connection
- User adjustable over-temperature cut-out
- Low liquid 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: ±0.005°C at 40°C
- 1.8kW heater power for fast heat up
- 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

Technical Specification

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	±0.005°C	±0.005°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 litres/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 (mm)	145	145
Dimensions L x W x H (mm)	237 x 124 x 260	237 x 124 x 260
TechneWorks software package	TechneWorks#	TechneWorks#



^{# (}See page 11 for details)

Ordering Information

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Product Code	Description	
FTU20DDC	TU-20D, advanced thermoregulator with RS232, -40°C to 200°C, (supplied with clamp)	
FTU20HDC	TU-20HT, advanced high temperature thermoregulator with RS232 and Techneworks software, -40°C to +250°C, (supplied with clamp)	
FCCO1	Cooling Coil	



TU-20D



TU-20HT