

TLB50 Tamson Low-temperature Bath

Tempering Bath for Sample Preparation



- ⊕ **Completely stainless steel**
- ⊕ **Drain to empty bath**
- ⊕ **Overflow protection**
- ⊕ **Large bath**
- ⊕ **Low noise**
- ⊕ **Auto tune, high precision**
- ⊕ **Fluid level detection**
- ⊕ **Multiple options for leveling platform**

General

TLB50 is a thawing bath for sample preparation. The bath has an operating range of -5°C up to +80°C. The benchtop bath with integrated cooling can replace the combination of a water bath with an external cooling circulator. This not only saves bench space, but also costs because of its high cooling efficiency. The TLB50 has a wide bath opening and several options like a fixed or split levelling platform and adjustable rack for placing different sized sample bottles. The primary use of the TLB50 is sample conditioning. Before most samples are analysed, they require to be conditioned to a specified temperature as described in each test method. Examples are:

- ASTM D323 Reid vapour pressure test between 0 to 1°C (32 to 34°F).
- ASTM D5 Penetration tests for bitumen.
- Long-term storage of gasoline <10°C or <20°C (<50° to 68°F).
- ASTM D86 Distillation.

Cooling medium

The used cooling system is ozone friendly and doesn't contain any CFK/HCFK gas.

Item	Unit	TLB50	TLB50 with pump
Range* ordering		-5..+80°C* 23..+176°F * Other range on request	
230V/50Hz		00T0072	00T0076
115V/60Hz		00T0071	00T0075
230V/60Hz		00T0073	00T0077
Reading	°C or °F	Menu selectable	
Interface		RS232	
Setting ±	[°C/F]	0.01	
Stability ± **	[°C]	0.02	
Uniformity ± **	[°C]	0.02	
Heating	[W]	2800W	
Heaters		2	
Bath volume	[L]	50	
Pump pressure	[mBar]	-	300 max
Pump cap.	[L/min]	-	7 max
Number of lids		Please see accessories	
Opening bath	[mm]	310 x 400 (L x W)	
Depth	[mm]	290	
Length	[mm]	720	
Width	[mm]	440	
Height	[mm]	720	
Weight	[kg]	65	
Power	[W]	Nominal 800 Maximum 3000	
Ambient condition	[°C]	18 .. 23	
CE		All models conform to CE regulation	

** Values measured in water @5°C

Control mechanism

With the compressor running continuously, the fluid temperature is regulated through an electronic controlled heater. The cooling power is maximized for rapid cooling down of the bath. When the set point temperature is reached cooling power is strongly reduced and it is saving significant energy. In comparison to other standard instruments the TLB50 can save up to 600 Watt of electric energy. Above 40°C cooling is switched-off automatically to save energy.

Temperature readout

Readout is in two decimals and can be switched between °C or °F via the menu.

Circulation

The bath with stirrer (P/N 00T0071, 00T0072 and 00T0073) uses a vane to stir the bath liquid. A special baffle plate ensures maximum homogeneity. TLB50 with pump (P/N 00T0071, 00T0072, 00T0073) provides circulation in the bath or via an external circuit. The pump offers 7 litres per minute. Maximum pressure is 300 mBar. Connector ¼" or 80 mm hose.

TLB50 Tamson Low-temperature bath

Tempering Bath for Sample Preparation

Safety

The bath has a standard built-in mechanical safety over temperature protection. In case of electronic failure, the bath will be mechanically switched-off when the temperature rises above the set temperature of this protection device.

Accuracy and performance TLB50

Accuracy of control

Stability
Better than $\pm 0.010^{\circ}\text{C}$

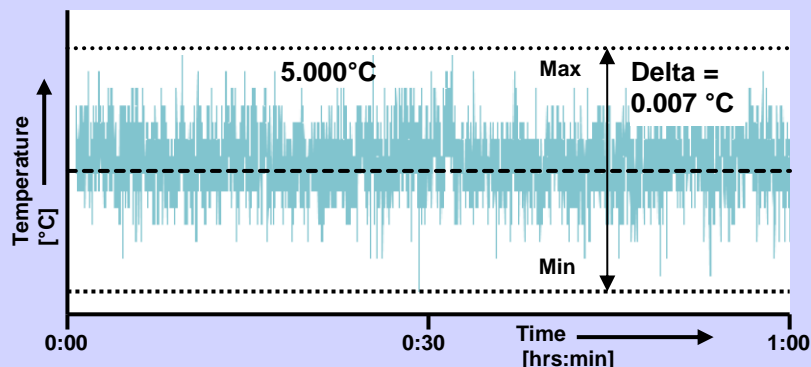
Homogeneity

Measured
Better than $\pm 0.010^{\circ}\text{C}$
- In water
- Over temperature 5 .. 70°C
- Values are measured min / max (no average)

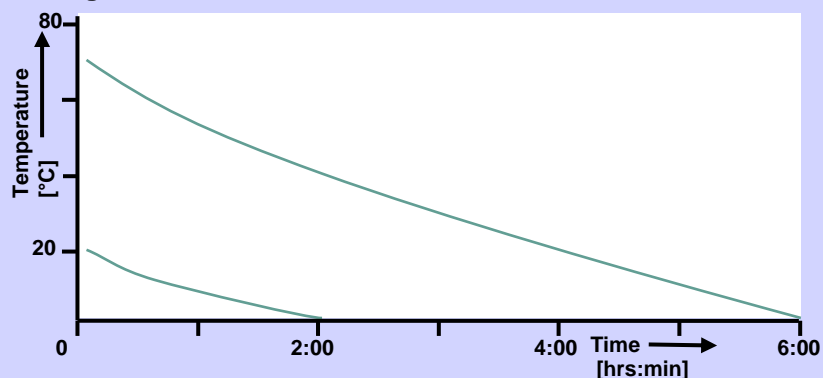
RS232

The bath comes standard with RS232 communication and when using the free software tool Tamcom, it provides temperature logging or a predefined temperature set point curve.

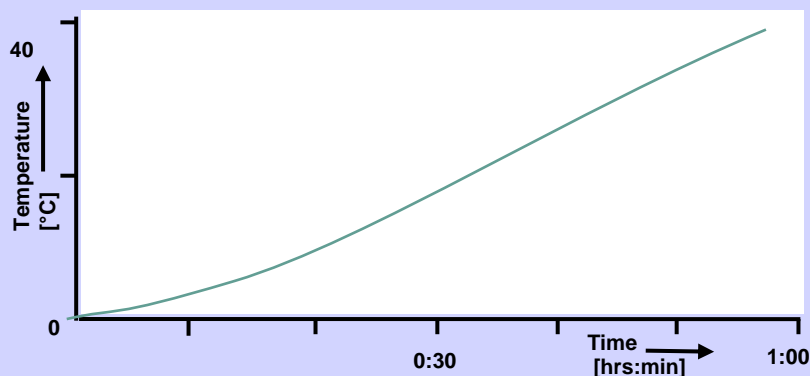
Stability @5.000 °C



Cooling



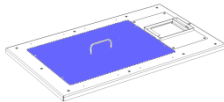
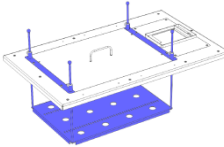
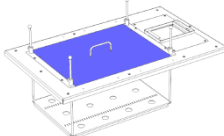
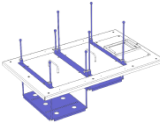
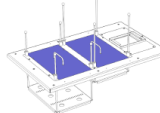
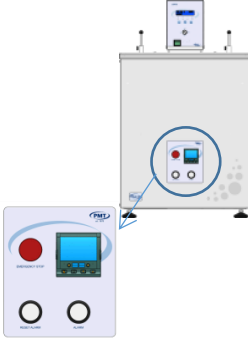
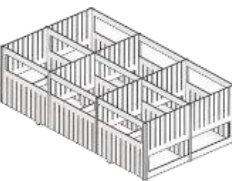
Heating



TLB50

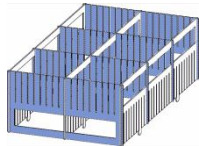

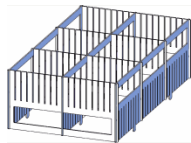

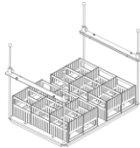
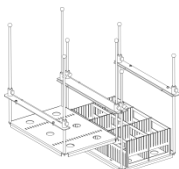
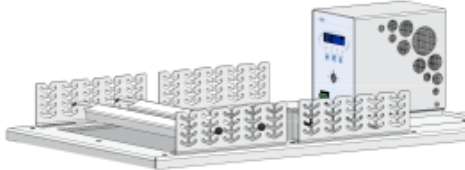
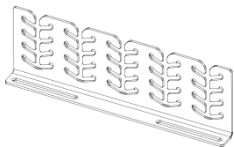

TLB50 Tamson Low-temperature Bath

Accessories

General accessories for Tamson Low-Temperature Bath 50 litres (TLB50)		
P/N	Picture	Description
03T2146		Top lid for bath for use without levelling platform. Complete with handle.
03T0071		Single levelling platform: - Adjustable - One platform - Without lid P/N 03T0080
03T0080		Top lid for single levelling platform (P/N 03T0071). Complete with handle.
03T0072		Double levelling platform: - Independantly adjustable - Two plaforms - Without two lids P/N 03T0081
03T0081		One lid for double levelling platform Complete with handle. Two P/N 03T0081 needed in combination with P/N 03T0072.
11T0040		Optional alarm to operate within temperature band. Three temperatures are pre set for operation: - Set point temperature - Minimum allowed bath temperature - Maximum allowed temperature After reaching the set point temperature, minimum and maximum temperatures are monitored. When the bath temperature exceeds the pre set values following options are available: - Audible alarm - Potential free external contact - Switching off the bath - A combination of the above Please contact sales for more specific details.
03T1049		Rack to hold bottles or glassware Combination with 1/2 Rack to be used with P/N 03T0072 - No rack - One 1/2 platform with rack, one 1/2 platform without rack - Both 1/2 platforms with rack P/N 03T1049 comes with: - Three long spacers - Four small spacers This set can be expanded using extra "small - P/N 03T1050" and "Wide - P/N 03T1051" spacers.

TLB50 Tamson Low-temperature Bath

Accessories

Accessories			
P/N	Picture	Description	
03T1050		Spacer small	
03T1051		Spacer wide	
Combinations	Single levelling platform	Single levelling platform (P/N 03T0071) can be fitted: - No rack - One rack (P/N 03T0071) - Two racks (P/N 03T0071)	
	Double levelling platform	Double levelling platform 1/2 Rack to be used with P/N 03T0072 - No rack - One 1/2 platform with rack, one 1/2 platform without rack - Both 1/2 platforms with rack	
Example		Single levelling platform with two racks: - One rack P/N 03T0071 - Two racks P/N 03T1049	
		Double levelling platform with one rack: - One rack P/N 03T0072 - One rack P/N 03T1049	
			
03T1040		1/2 Rail to hold bracket(s) preventing bottles from floating: - With one levelling platform P/N 03T0071: four are needed - With one 1/2 Levelling platform (P/N 03T0072): two are needed - With two 1/2 Levelling platforms (P/N 03T0072): four are needed	
03T1041		Bottle bracket. Prevents bottles from floating. To be placed in rail (P/N 03T1040)	