Tamson Instruments
Specification sheet

TLB50 Tamson Low-temperature Bath

Bath for Sample Preparation

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

Item	Unit	TLB50	TLB50 with pump
Range*		-5..+80°C* 23..+176°F * Other range on request	
P/N 230V/50Hz		**00T0072**	**00T0076**
P/N 115V/60Hz		**00T0071**	**00T0075**
P/N 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 230V	[kW]	2.8 (2 1400W heaters)	
Heating 115V	[kW]	1.4 (1 heater)	
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			

TLB50

General
The 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 an adjustable rack for placing different sized sample bottles. The primary use of the TLB50 is sample preparation. Before most samples are analysed, they require to be conditioned to a specified temperature as described in a 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.

Control mechanism
With the compressor running continuously, the fluid temperature is regulated through an electronic controlled heater. The cooling power of the bath is maximized when cooling down to the set point. 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 TLB50 with stirrer (P/N 00T0071, 00T0072 and 00T0073) uses a vane to stir the bath liquid. A special baffle plate ensures maximum homogeneity. The TLB50 with pump (P/N 00T0075, 00T0076, 00T0077) provides circulation in the bath and to an external circuit. The pump offers 7 litres per minute. Maximum pressure is 300 mBar.

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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.

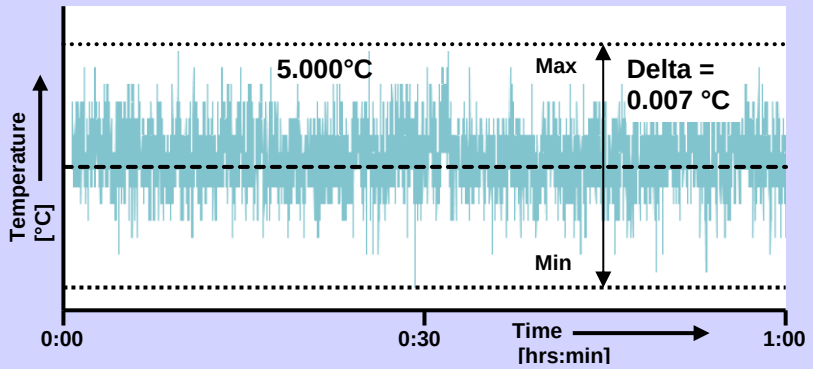
Accuracy and performance TLB50

Accuracy of control
Stability
Better than ± 0.01°C

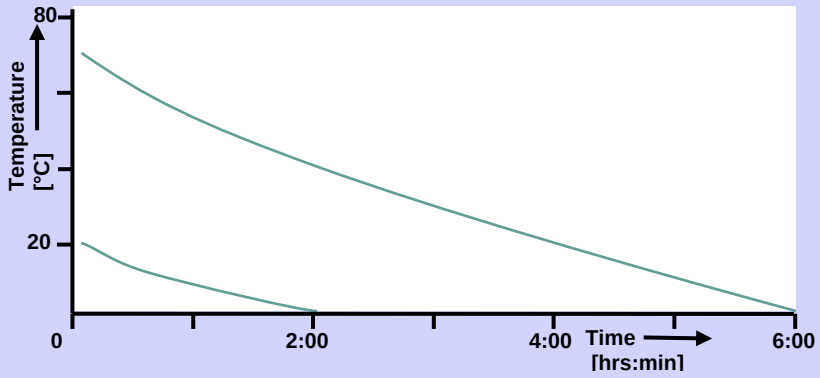
Homogeneity
Better than ± 0.01°C
- In water
- Over temperature 5 .. 70°C
- Values are measured min / max (no average)

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.

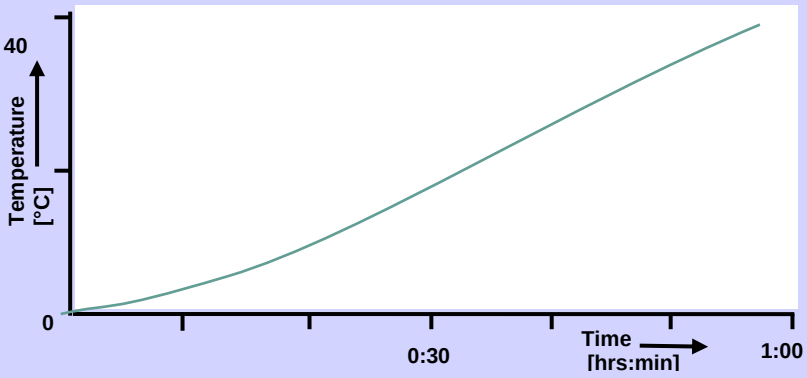
Stability @5.000 °C



Cooling



Heating



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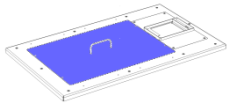
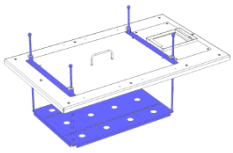
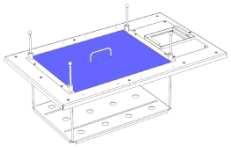
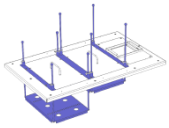
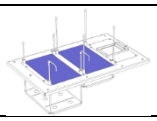
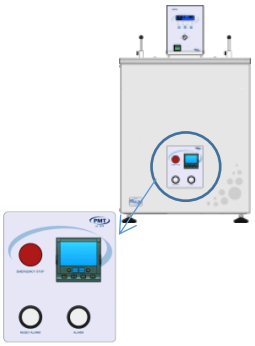
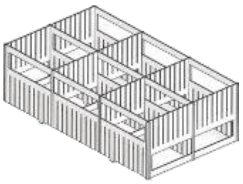
TLB50 Tamson Low-temperature Bath

Accessories

General accessories for Tamson Low-Temperature Bath 50 litres (TLB50). To be ordered as additional P/N.		
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: - Independently 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 Several combinations are possible with this rack and the double levelling platform (P/N 03T0072): - One platform with rack, one platform without rack - Both platforms with racks Several combinations are possible with this rack and the single levelling platform (P/N 03T0071): - One rack - Two racks P/N 03T1049 comes with: - Three wide spacers - Four small spacers This rack can be expanded using extra small spacers (P/N 03T1050) and wide spacers (P/N 03T1051) (see next page)

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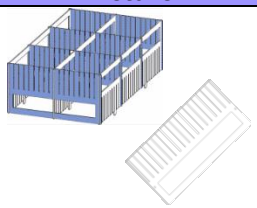
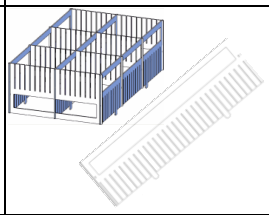
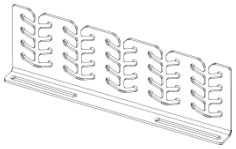
Accessories

Accessories		
P/N	**Picture**	**Description**
03T1050		Spacer small
03T1051		Spacer wide
03T1040		Rail to hold bottle bracket(s) preventing bottles from floating: - With one rack (P/N 03T1049): two are needed - With two racks (P/N 03T1049): four are needed
03T1041		Bottle bracket. Prevents bottles from floating. To be placed in rail (P/N 03T1040) - With one rack (P/N 03T1049): two are needed - With two racks (P/N 03T1049): four are needed

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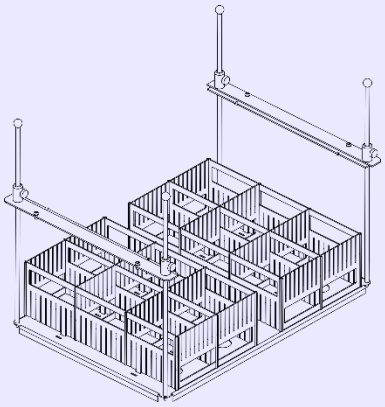
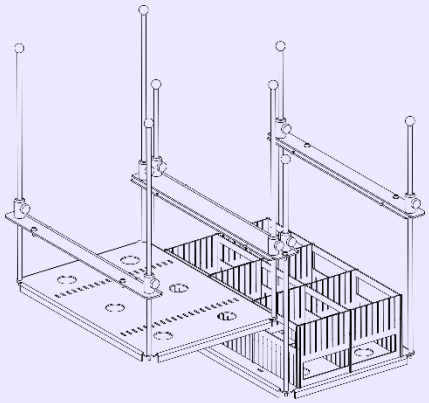
Accessories - examples

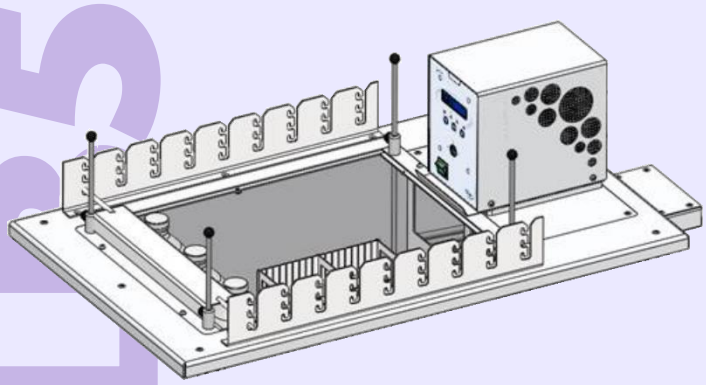


Single levelling platform with two racks:
- One leveling platform (P/N 03T0071)
- Two racks (2 * P/N 03T1049)



Double levelling platform with one rack -
One double leveling platform (P/N 03T0072)
- One rack (P/N 03T1049)

TLB50



Example of rail on top of TLB50
- Four rails (P/N 03T1040)