

Specifications TV7000LT

Tamson Visibility bath 70 Litres Low Temperature - ASTM D445



Top lid stainless steel
 Integrated cooling
 High precision better than $\pm 0.02^{\circ}\text{C}$
 Large windows, no condensation
 Easy to operate
 RS232 communication

General

The TV7000LT is a unique visibility bath with wide dimensions.

An integrated cooling system is able to lower the bath temperature down to minus 40°C within approximately four hours. The cooling power is controlled over four stages, so that the heat removal capacity is trimmed to the desired set point temperature, saving up to 50% of energy.

Due to its wide temperature range the bath can be used for multiple purposes varying from sub-zero temperature viscosity determination to calibration of sensors or thermometers. The large windows show the bath contents clearly. The windows are heated preventing build-up of condensate.

The bath can be emptied via a drain. If bath fluid expands at higher set point temperatures overflow of bath is protected via a drain. A LED fluid level indicator alarms when fluid level is too low.

Item	Unit	TV7000LT
P/N 230V/50Hz		00T0450
P/N 230V/60Hz		On request
P/N 115V/60Hz		On request
Power	[kW]	3.1
Used materials inside bath		Stainless steel, brass bearings
Range		-40 .. $+100^{\circ}\text{C}$ -40 .. 212°F
Reading		Standard $^{\circ}\text{C}$, $^{\circ}\text{F}$ on request
Setting	[$^{\circ}$]	0.01
Stability \pm	[$^{\circ}\text{C}$]	Better than 0.02
Heating	[kW]	1.5 + 0.5 [two heaters]
Bath volume	[L]	70
Opening	[mm]	260 x 240
Depth bath	[mm]	600
Length	[mm]	560
Width	[mm]	492
Height	[mm]	1450
Noise level	[db]	61
Weight	[Kg]	120
CE		Conforms to CE regulation

Span

The bath temperature can be set from -40°C to a maximum of $+100^{\circ}\text{C}$ in steps of 0.01°C .

Accuracy

Overall accuracy is better than $\pm 0.02^{\circ}\text{C}$, over the whole temperature range. Ambient temperature drift $< 0.003^{\circ}\text{C}/^{\circ}\text{C}$. The homogeneity is better than 0.02°C . Drift, accuracy and homogeneity were measured with methanol as bath medium and are true min-max values found over eight hours.

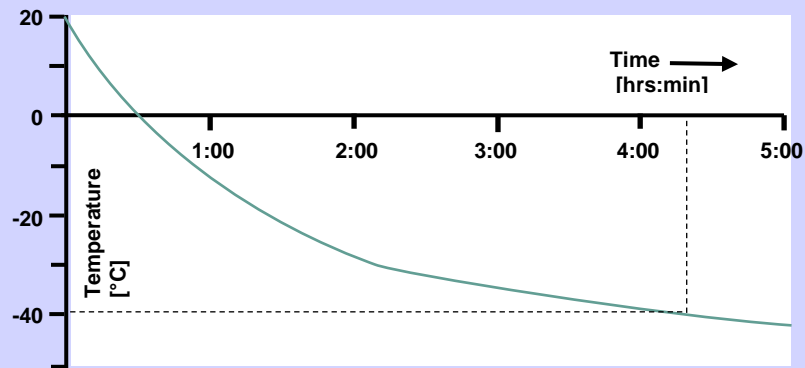
Safety

The bath conforms to CE regulation. Further it is equipped with multiple safety features in order to guarantee safe around the clock operation. A mechanical safety thermostat protects the bath against high temperatures and will automatically reset itself after switching the bath off and on again. In case of over temperature electronics and motor are switched off. The pump motor is protected against mechanical overload via a resettable fuse.

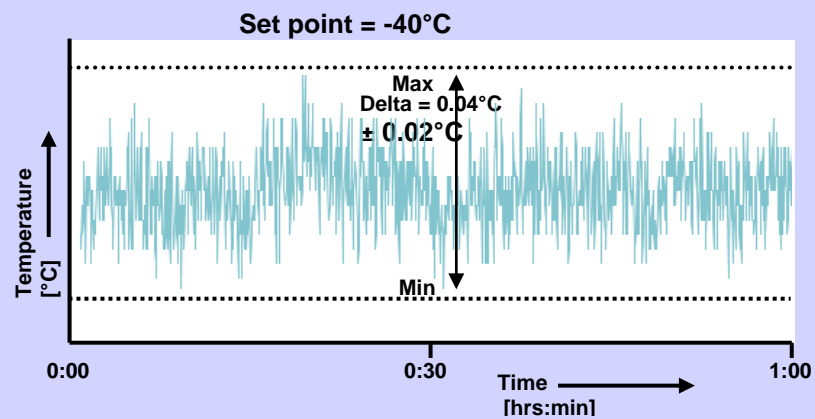
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Cooling down (methanol used as bath liquid)





Temperature stability (methanol used as bath liquid)







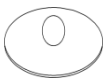


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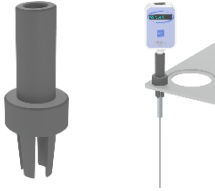

Standard cover and Optional cover

TV7000LT is standard included with:		
P/N	Picture	Description
23T2400		Cover with 7 openings: - 7 x $\varnothing 51$ mm opening - 2 x $\varnothing 12.5$ mm opening for thermometer
		7 * lid for $\varnothing 51$ mm opening

Optional covers for TV7000LT:		
P/N	Picture	Description
23T2401		Cover with 8 openings: - 8 x $\varnothing 51$ mm opening - 2 x $\varnothing 12.5$ mm opening for thermometer
		8 * lid for $\varnothing 51$ mm opening
23T2402		Cover with 8 openings: - 8 x $\varnothing 60$ mm opening - 2 x $\varnothing 12.5$ mm opening for thermometer
		8 * lid for $\varnothing 60$ mm opening
23T2403		Cover with 7 openings: - 4 x $\varnothing 51$ mm opening - 3 x $\varnothing 60$ mm opening - 2 x $\varnothing 12.5$ mm opening for thermometer
		4 * lid for $\varnothing 51$ mm opening
		3 * lid for $\varnothing 60$ mm opening

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Accessories

Accessories		
P/N	Picture	Item
00T0907		Back panel Z71 85~230V/50~60Hz
10T6094		Tamson TT3B thermometer with external probe, three decimal reading, precision $\pm 0.01^{\circ}\text{C}$, short PT-100 probe with range $-40 \dots +140^{\circ}\text{C}$ including a works calibration certificate. (Please see specification sheet "TT3B thermometer")
14T0303		Adapter to insert a TT3B thermometer in the opening of the cover
Viscosity Accessories		Please see specification sheet "Viscosity Accessories"