Tamson Instruments

Specification sheet

Specifications TV4000LT

Tamson Visibility Bath 40 Litres Low Temperature - ASTM D445

Item	Unit	TV4000LT
P/N 230V/50Hz		00T0460
P/N 230V/60Hz		On request
P/N 115V/60Hz		On request
Power	[kW]	3 Max
Used materials inside bath		Stainless steel, brass bearings
Range		-40 .. +100°C -40 .. +212°F
Reading		Standard °C, on request °F
Setting	[°]	0.01
Stability ±	[°C]	Better than 0.02
Heating	[kW]	1.5 + 0.5 (2 heaters)
Bath volume	[L]	40
Opening	[mm]	260 x 240
Depth bath	[mm]	300
Length	[mm]	560
Width	[mm]	492
Height	[mm]	1150
Noise level	[db]	61
Weight	[Kg]	100
CE	Conforms to CE regulation	

TV4000LT

- **Top lid stainless steel**
- **Integrated cooling**
- **High precision better than ± 0.02°C**
- **Large windows, no condensation**
- **Easy to operate**
- **RS232 communication**

General
The TV4000LT 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 two hours. The cooling power can be 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.

Span
The bath temperature can be set from -40°C to a maximum of +100°C in steps of 0.01°C.

Accuracy
Overall accuracy is better than ± 0.02°C over the whole temperature range. Ambient temperature drift <0.003°C/°C. The homogeneity is better than 0.02°C. Drift, accuracy and homogeneousness 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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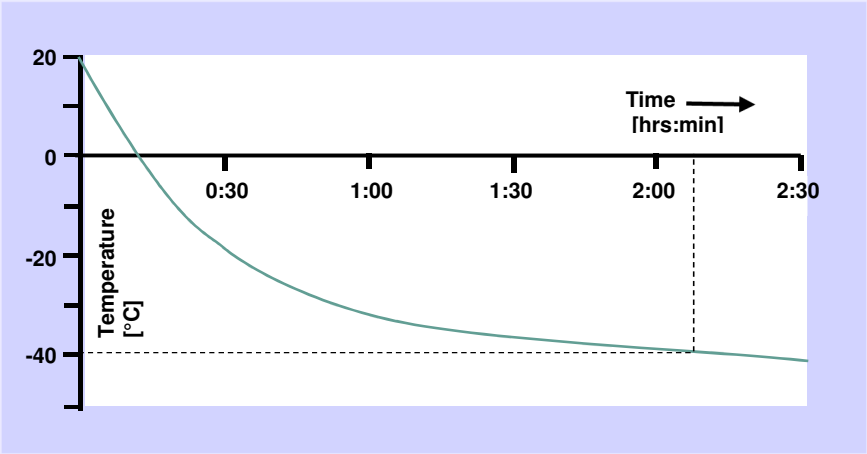
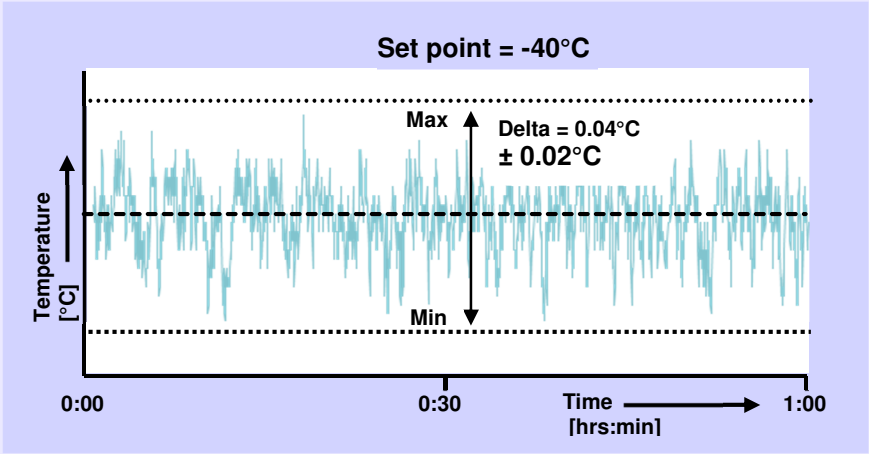
Cooldown of TV4000LT (methanol used as bath liquid)



Temperature stability (methanol used as bath liquid)



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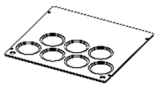
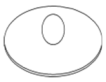
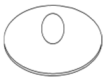
Standard cover and optional covers

TV4000LT is standard included with:		
P/N	**Picture**	**Description**
23T2400		Cover with 7 openings: - 7 x ø51 mm opening - 2 x ø12.5mm opening for thermometer
		7 * lid for ø 51 mm opening

Optional covers for TV4000LT:		
P/N	**Picture**	**Description**
23T2401		Cover with 8 openings: - 8 x ø51 mm opening - 2 x ø12.5mm opening for thermometer
		8 * lid for ø 51 mm opening
23T2402		Cover with 8 openings: - 8 x ø60 mm opening - 2 x ø12.5mm opening for thermometer
		8 * lid for ø 60 mm opening
23T2403		Cover with 7 openings: - 4 x ø51 mm opening - 3 x ø60 mm opening - 2 x ø12.5mm opening for thermometer
		4 * lid for ø 51 mm opening
		3 * lid for ø 60 mm opening

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Accessories

Accessories		
P/N	**Picture**	**Description**
19T4024		E20 Digital contact thermometer.Two decimal readout. Temperature range -40°C to 140°C. Please see specification sheet “E20 Thermometer” for more information.
14T0303		Adapter to insert an E20 thermometer in the opening of the cover
Viscosity Accessories		Please see specification sheet “Viscosity Accessories”

TV4000LT