

Specifications TV2000, TV4000, TV7000

Tamson Visibility bath 20, 40, 70 litres



- ⊕ Completely stainless steel,
- ⊕ Conforms to ASTM D445
- ⊕ High precision better than $\pm 0.02^{\circ}\text{C}$,
- ⊕ Large windows
- ⊕ Easy to operate,
- ⊕ RS232 communication

Item	Unit	TV2000	TV4000	TV7000
Ordering code 230V 50~60Hz		00T0782	00T0772	00T0792
Ordering code 115V		00T0784	00T0774	00T0794
Range		ambient..230°C/..446°F		
Reading		°C or °F menu selectable		
Interface		RS232		
Setting $\pm$	[°C]	± 0.01		
Stability *	[°C]	± 0.01		
Uniformity *	[°C]	± 0.01		
Heating 230V	[KW]	3	3	3
Heating 115V	[KW]	2,3	2,3	2,3
Heaters		2	2	2
Bath volume	[L]	20	40	70
Number of lids		3	4 + 3 or 4 + 4	4 + 3 or 4 + 4
Window	[mm]	140 * 285	270 * 285	270 * 585
Opening lid	[mm]	51(dia.)	51(dia.)	51(dia.)
Opening bath	[mm]	130*165	260 * 240	260*240
Depth	[mm]	300	300	600
Length	[mm]	285	350	350
Width	[mm]	465	590	630
Height	[mm]	585	585	885
Weight	[kg]	40	41	61
Power	[Watt]	2800	2800	2800
Frequency	[Hz]	Suited for both 50 & 60		
CE		All models conform CE regulation		

* Value measured in water @ +50°C/+122°F

General

Tamson viscometer and Tamson calibration baths are specially designed for tests that require ultra precise temperature control, or processes that need to be followed visually, e.g. viscometry, thermometer calibration, crystal growing, density and reaction rate measurement, etc. All models are fitted with double windows in front and rear walls. The windows are formed with two panes of tempered safety glass separated by 20 mm air space. Visibility through the bath is excellent.

Construction

The stainless steel construction with 25mm thick glass wool insulation ensures exceptionally stable temperatures which is further improved by an ingenious stirring mechanism with baffle plates. All wetted parts are made of stainless steel and PTFE, providing resistance against all usual bath fluids. The bath is fitted with adjustable feet for levelling. The cover of the bath has a number of round 51 mm holes with lids, for suspending glass capillary viscometers in holders. To work at temperatures lower than ambient plus 5°C, use of cooling must be made. Cooling fluid can be pumped through the cooling coil inside the apparatus. Tap water or a combination with the TLC2 or TLC15 can be used for this purpose. All models are fitted with double windows in front and rear walls. The windows are formed with two panes of tempered safety glass separated by 20 mm air space. Visibility through the bath is excellent. A powerplug on the back is mounted to provide power for an optional illumination unit (Z41 or Z71).

Agitation

A vane type stirrer with PTFE bearings moves the bath fluid past the heaters and then from under the main baffle plate, thus directing the freshly heated fluid to the walls as well as window areas and creating an optimal temperature uniformity.

Span

All baths can be operated from ambient +5 up to +230°C(41..446°F). With the use of the built-in cooling coil, span lies 5°K above the temperature of the cooling liquid.

Accuracy

The set point can be set in steps of 0.1° up to 199.9°. From 199.9° up to 230°C/446°F steps of 1° must be made. The system overall accuracy is within $\pm 0.01^{\circ}\text{K}$.

Fine adjustment and offset

After the bath has stabilised the set point may be more accurately adjusted in the range of -1.99° to +1.99°, if necessary.

Viscometer arrangement

The stainless steel bath cover 7 openings with lids, arranged in two rows of resp. 4 and 3 or 8 openings (2*4 openings), are provided for the TV4000 and TV7000. The TV2000 offers 3 openings (2 + 1 lid). These openings of 51 mm diam. will accommodate glass capillary in holders (see our viscometer datasheet). Additionally, a separate thermometer can be placed through two 13mm holes in the cover.

Safety

The bath conforms to CE regulations. It also is equipped with a mechanical adjustable and resettable safety thermostat. Advanced safety features are microprocessor control of:

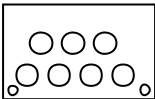
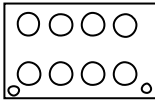
- Electronic- and processor system,
- Control and feedback from each heating,
- System accuracy.

System error results in total cut-off from the power supply.

Optional equipment

See next page.

Accessories

Item		TV2000	TV4000	TV7000
Cover 3 lids (ø 51 mm) + hole for thermometer (ø 12,1 mm)		Standard		
Cover 4 lids (ø 51 mm) + hole for thermometer (ø 12,1 mm)		03T3211		
Cover 7 lids (ø 51 mm) + hole for thermometer (ø 12,5 mm)			Standard	
Cover 8 lids (ø 51 mm) + hole for thermometer (ø 12,5 mm)			00T0729	
Illuminator "Z41"		230V/50-60Hz 00T0900 115V/50/60Hz 00T0905		
Illuminator "Z71"				230V/50/60Hz 00T0910 115V/50/60Hz 00T0915
Cooling circulator TLC10		TLC10 - 230V/50Hz 00T0050 TLC10 - 230V/60Hz 00T0051 TLC10 - 115V/60Hz 00T0052		
Cooling circulator TLC15			TLC15 - 230V/50Hz 00T0565 TLC15 - 115V/60Hz 00T0570	
Timer		10T6090		

Also see following datasheets:

Bath fluid
Viscometer accessories
Viscometers (glas capillary)
Reference oil for viscosity measurement.