Specifications TV12LT

Tamson Visibility bath 15 liters

Item	Unit	TV12LT		
Range* ordering		-40..+20°C -40..+68°F	-40..+80°C -40..+176°F	-50..+20°C -58..+68°F
230V/50Hz		00T0410	00T0425	00T0470
115V/60Hz		00T0415	00T0430	00T0475
230V/60Hz		00T0420	00T0435	00T0480
Reading	°C or °F	menu selectable		
Interface		RS232		
Setting ±	[°C/F]	0.01		
Stability **	[°K]	stdev 0.004 min/max ±0.014		
Uniformity **	[°K]	stdev 0.004 min/max ±0.013		
Heating	[W]	500 + 700		
Heaters		2		
Bath volume	[L]	15		
Number of lids		1 lid with 4 x round diameter 51mm		
Window	[mm]	255x230		
Opening bath	[mm]	248*73		
Depth	[mm]	300		
Length	[mm]	670		
Width	[mm]	425		
Height	[mm]	720		
Weight	[kg]	65		
Power	[Watt]	Nominal 800 Maximum 2100		
Ambient condition	[°C]	18 .. 23		
CE		All models conform to CE regulation		

* **+/- 2°C production variation**

** **Measured @-20°C in methanol**

- **Small footprint**
- **Detachable front window**
- **Internal LED light**
- **Ultra high stability**
- **RS232 communication**
- **Bath drain**
- **Built-in cooling**
- **-50°C / -40°F**
- **4 places, small bath volume**

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(conforms to ASTM D445, IP71-1), thermometer and sensor calibration, density and reaction rate measurement, etc. The bath is fitted with a double window of which the front pane is detachable for cleaning purposes. The window is heated preventing built up of condensate.

Construction

The stainless steel construction 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 4 round 51 mm holes with lids, for suspending glass capillary viscometers in holders. The use of thermo insulated windows and window heating ensures clean sight. A permanent LED light is located in the top plate to supply clear light and guarantee optimal visibility inside the bath. A bath overflow outlet protects against expanding bath oil when the bath filling is too high.

Agitation

A vane type stirrer with maintenance free bearings moves the bath fluid past a special heater ensuring optimal control temperature and excellent uniformity.

Span

Dependable from ordering code. Span lies from -50°C/-58°F up to + 80°/176°F

Safety

The bath conforms to CE-regulation. Further the bath is equipped with a mechanical over temperature device which trips when in case of malfunction the bath exceeds the preset maximum temperature. This feature guarantees safe around the clock operation.

Fine adjustment and offset

After the bath has stabilized the set point may be more accurately adjusted in the range of –5.00° to + 5.00°, if necessary.

Ambient condition

For proper cooling performance ambient temperature needs to be within the range of 18 .. 23°C.

Options

- Optical Level indicator **07T0080**

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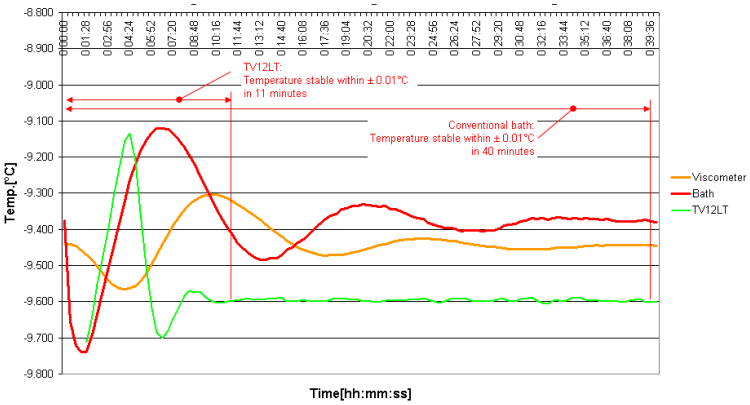
Accuracy
Recovery from temperature dip

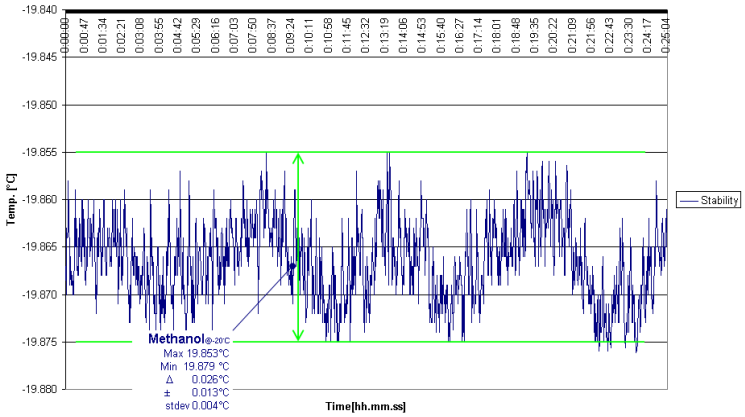
TV12 bath

Conventional bath

Inside glass viscometer tube



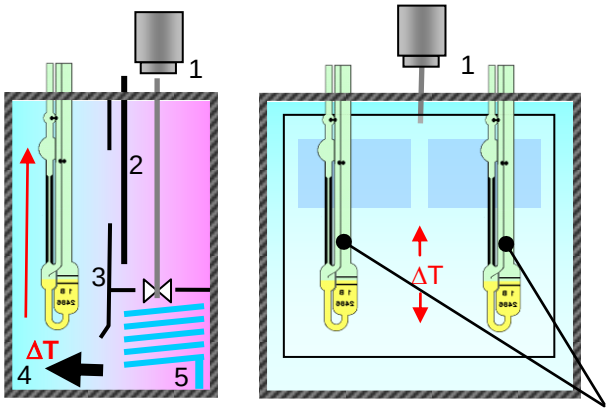
Accuracy
Methanol
standard deviation ± 0.004°C
min / max ± 0.013°C



Homogeneity
Methanol
standard deviation ± 0.004°C
min / max ± 0.013°C

1: Stirrer
2: Heater
3: Baffle plate
4: Circulation
5: Cooling

TV12LT

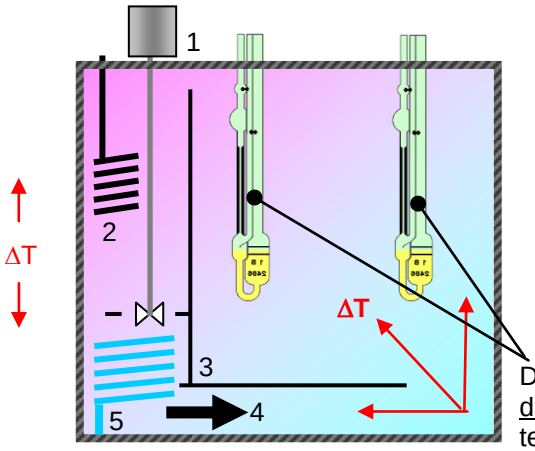


Side view

Front view

Devices have same temperature

Conventional bath



Front view

Devices have different temperature

Temperature gradient TV12LT
versus conventional system

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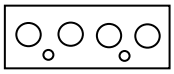
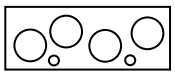
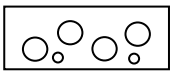
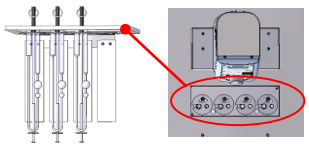
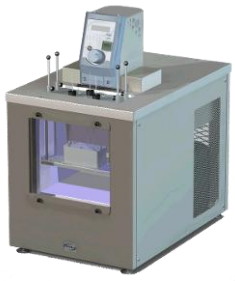
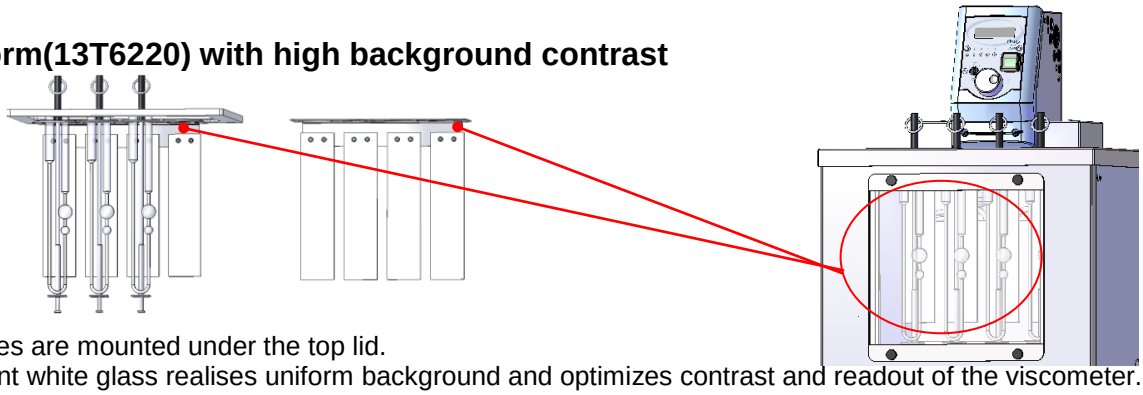
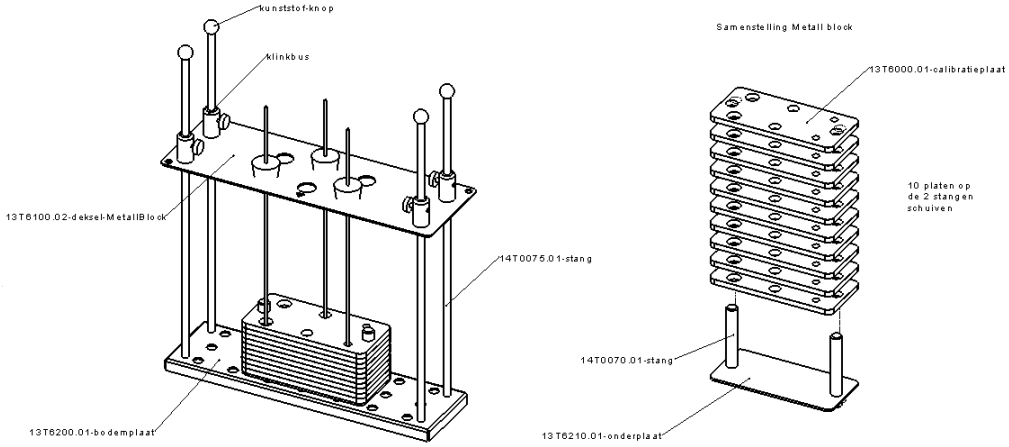
Item				
Timer		**10T6090**		
Bath fluid		See datasheet "Bath fluids"		
Thermometers		ASTM nr.	Ordering no.	Range°C
		44C	25T0937	+18.5 … +21.5
		46C	25T0938	+48,6 .. +51,4
		120C	25T0990	+38.6 … +41.4
		46C	25T0939	+48.6 … +51.4
		47C	25T0940	+ 58.6 … +61.5
		121C	25T0991	+98.6 … +101.4
		127C	25T0995	-21,4 … -18,6
		128C	25T0994	-1,4 .. 1,4
		Other ranges available on request		
Thermometer holder		**00T0239**		
Calibration,reference oils		See datasheet "Viscosity calibration standards"		
Glass viscometers		See datasheet "Viscometer to ASTM D446, IP71 and BS188"		
Viscometer holders		See datasheet "Viscometer holders"		
Cover lid		This item is standard included	**13T3006.08**	
Cover lid		Cover with 4 holes of 60 mm for Pinkevitch viscometers	**03T2117**	
Cover lid		Optional to be ordered for 4 full position Cannon Fenske Transparent	**13T3006.09**	
Cover lid, improved contrast viscometer reading with 13T3006.08			**13T6220**	
Leveling platform			**13T6200**	
Calibration/metall block			**13T6210**	

Levelling platform(13T6220) with high background contrast

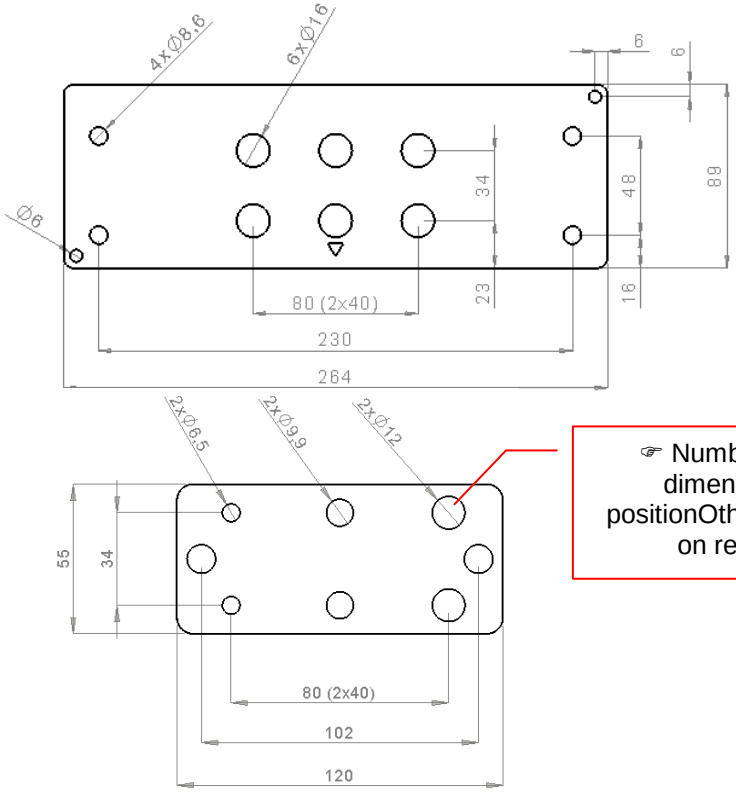


4 opaline glass plates are mounted under the top lid.
The semi transparant white glass realises uniform background and optimizes contrast and readout of the viscometer.

Levelling platform(13T6200) and metal block(13T6210)



Dimensions top plate



☞ Number of holes, dimensions and positionOther dimensions on request ☜

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