

Specifications TLC10-3

Tamson low-temperature circulator



- ⊕ **Completely stainless steel**
- ⊕ **Compact, small footprint**
- ⊕ **Standard RS232, free software**
- ⊕ **Low noise**
- ⊕ **Bath level indication, drain**
- ⊕ **Easy service of cooling unit**

General

The TLC10-3 has been developed to be used as a general purpose circulator and this apparatus can be used in various applications where cooling is needed. Experiments, refractometers, rotary evaporators, distillation units, water baths, flashpoint testers all are applications of where the TLC10-3 can be used for.

The apparatus holds a small bath containing 3.5 litres and the filling opening measures 40 x 120mm. Due to its special design the system is extremely quiet, compact and saves costly laboratory space. Readout is in degrees °C or on in °F.

Cooling medium

The cooling system inside the TLC10-3 is ozone friendly and doesn't contain any CFK/HCFK gas.

Safety

The bath conforms to CE regulation. It further is equipped with a mechanical adjustable safety thermostat.

Item	Unit	TLC10-3	
230V /50Hz		00T0050	
230V /60Hz		00T0051	
115V / 60Hz		00T0052	
Power	[kW]	1,3 max.	
Used materials wetted parts		Stainless steel, PTFE	
Range	[°C] [°F]	-10 .. 60 [°C] +14 .. 140[°F]	
Optional range Available		-10 .. 120[°C] +14 .. 248[°F]	
Reading		°C or °F (menu selectable)	
Setting ±	[°]	0.01	
Stability ±	[°K]	Better than 0.05	
Heating	[kW]	1.1 (1 heater)	
Bath volume	[L]	3.5	
Pump pressure	[mBar]	300 max	
Pump cap.	[L/min]	7 max	
Compressor	[HP]	1/14	
Heat removal	[W]	@50°C	320
	[W]	@0°C	100
	[W]	@-10°C	50
Opening	[mm]	40x115	
Depth bath	[mm]	150	
Length	[mm]	355	
Width	[mm]	195	
Height	[mm]	410	
Weight	[kg]	18	
CE		Conforms to CE regulation	

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.

Control mechanism

The TLC10-3 combines a wide temperature range and maintenance free -long life- cooling system. Accurate temperature regulation is provided by a microprocessor controlled PID system of which the PID parameters can be set freely. The cooling system provides rapid cooling down of the 3.5 litres bath contents.

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Span

The working temperature ranges from:
-10..+60°C / +14..+140°F

Optional feature:

-10..+150°C / +14..+284°F

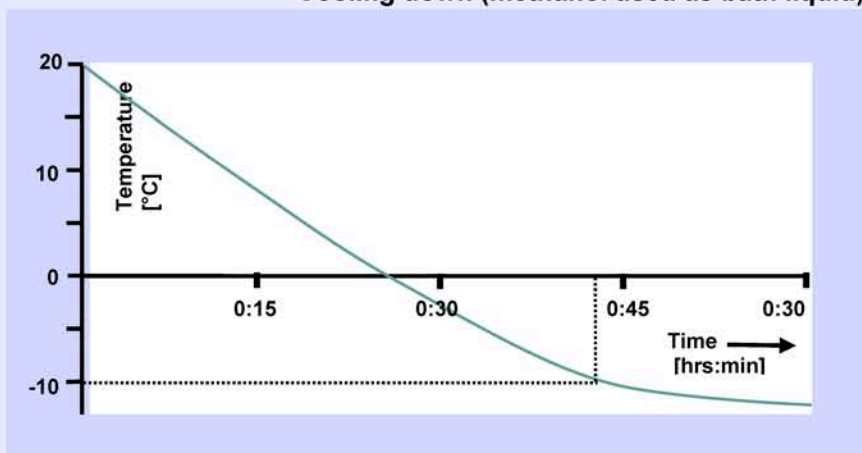
Accuracy

The set point can be set in steps of 0.1°K. The overall system accuracy is better than $\pm 0.05^\circ\text{K}$. Temperature readout in 0.01°K

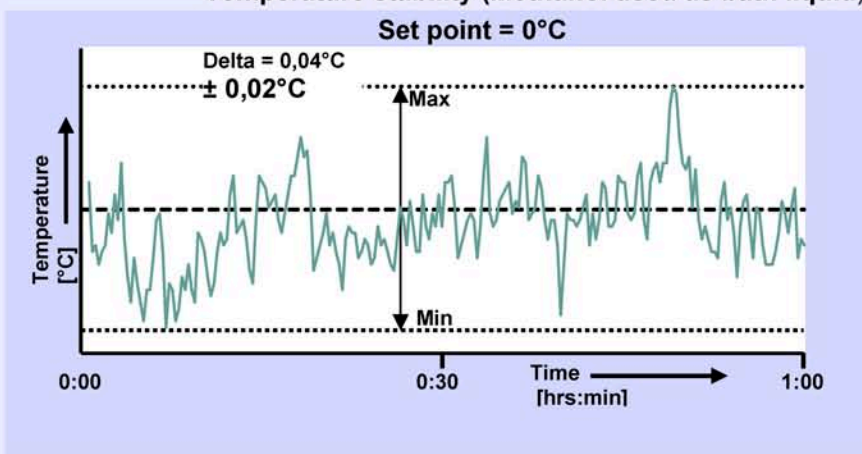
Pump

A pump provides circulation in the bath or via an external circuit. The pump offers 7 litres per minute maximum pressure is 300mBar. Connector 1/4"R or 8mm hose.

Cooling down (methanol used as bath liquid)



Temperature stability (Methanol used as bath liquid)



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