

TLC15-5

Tamson Low-Temperature Circulator



RS232, free communication software
Drain to empty bath
Compact, small foot print
Very quiet
Fluid level detection (float)
Overflow outlet

General

The TLC15-5 is a very compact general purpose circulator and this apparatus can be used in various applications where cooling is needed. Experiments, refractometers, rotary evaporators, distillation units, water baths, flash point testers all are applications of where the TLC15-5 can be used for. Because of its very small size, the TLC15-5 can easily be fitted into your laboratory, either on or under the workbench.

The apparatus holds a bath containing 5 litres and the filling opening measures 85 x 150 mm. 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 TLC15-5 is ozone friendly and doesn't contain any CFK/HCFK gas.

Item	Unit	TLC15-5			
P/N 230V/50Hz		00T0565			
P/N 230V/60Hz		00T0567			
P/N 115V/60Hz		00T0570			
Power	[kW]	1.4			
Used materials inside bath		Stainless steel, brass bearing			
Range		-15..+60 °C -5..+140°F -15..+120 °C on request			
Reading	[°C/°F]	°F on request			
Setting	[°C/°F]	0.01			
Stability ±	[°C]	0.02			
Heating	[kW]	1.1 (1 heater)			
Bath volume	[L]	5			
Pump pressure	[Bar]	0.3 / 0.7* max			
Pump cap.	[L/min]	7 / 10* max			
Heat removal at temperature specified in °C	[W]	+2°C	250	-12°C	75
	[W]	-7°C	200	-14°C	50
	[W]	-10°C	150		
Opening bath	[mm]	85 x 150 (effective use)			
Depth bath	[mm]	150			
Length	[mm]	420 (460 incl drain)			
Width	[mm]	265			
Height	[mm]	565			
Weight	[kg]	30			
CE	Conforms to CE regulations				
* P/N 04T0225 optional pump (85~260V/50-60Hz) pressure max 0.7 Bar. flow max 10 L/min.					

Safety

The bath conforms to CE regulation. It further is equipped with a mechanical adjustable safety thermostat. The TLC15-5 is also equipped with a float to warn the user when the bath fluid is too low.

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 TLC15-5 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 5 litres bath content.

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Span

The working temperature ranges from:
-15..+60°C / -5..+140°F

Optional feature:

-15..+120°C / -5..+284°F

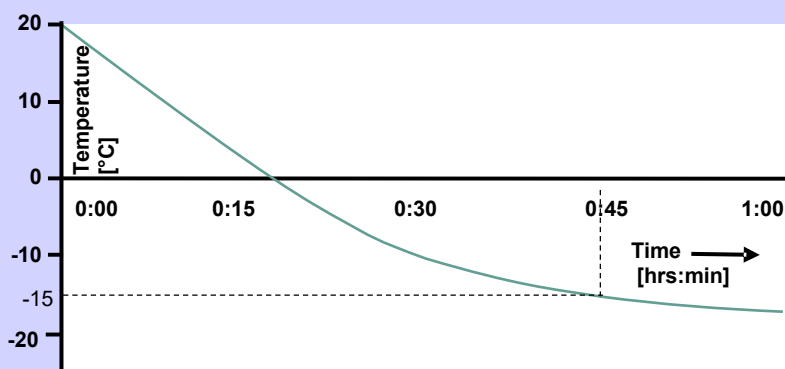
Accuracy

The set point can be set in steps of 0.01°C. The overall system accuracy is better than $\pm 0.02^\circ\text{C}$. Temperature readout in 0.01°C.

Pump

A pressure pump provides circulation in the bath or via an external circuit. The pump pressure is 0.3 Bar and 7 litres per minute (no counter pressure). Optional is a performance pump, P/N 04T0225 (pump pressure 0.7 Bar, flow max 10 L/min) .

Cooling down (methanol used as bath liquid)



Standard pump versus optional “performance” pump P/N 04T0225

