

Specifications TLC80-14DP

Tamson low-temperature circulator Double Power



Completely stainless steel
Wheels fitted for easy transport
Auto tune, high precision
Fluid level detection
Compact, high power
Excellent insulation

General

The TLC80-14DP is a low temperature circulator with a bath contents of 14 litres. The minimum temperature which can be reached is minus 82°C. At -80°C the heat removal capacity is 150 Watts. The bath can be used for general low temperature use but shows excellent heat removal performance i.e. in combination with Cloud and Pour point tests. Low fluid level is detected electronically.

Cooling medium

The used cooling system is ozone friendly chlorine free HFC refrigerant.

Control mechanism

With the compressor running continuously, the fluid temperature is regulated through an electronic controlled heater. A single switch can turn the apparatus into economy mode when the full cooling capacity is not needed.

Safety

The bath conforms to CE regulation. It also is equipped with a mechanical resettable over temperature safety cut out.

Item	Unit	TLC80-14DP		
Ordering code		00T0540		
230V /50Hz*				
115V /60Hz*		N.A.		
Power	[kW]	3.6 max		
Used materials inside bath		Stainless steel Chrome plated coil		
Range		-82°C ..ambient -120°F ..ambient		
Reading		Standard °C, °F on request		
Setting ±	[°]	0.1		
Stability ±	[°K]	Better than 0.05		
Heating	[W]	1.6 (1 heater)		
Bath volume	[L]	14		
Pump pressure*	[mBar]	300 max		
Pump cap.*	[L/min]	10		
Compressor	[kW]	4 * 0.5		
Heat removal	Power	°C	Economy	Full
	[W]	@-70°	200	350
	[W]	@-77°	50	200
	[W]	@-80°	0	150
Opening	[mm]	240 x 170 (240 x 160 effective)		
Depth bath	[mm]	150		
Length	[mm]	781		
Width	[mm]	496		
Height	[mm]	1175		
Weight	[kg]	140		
CE		Conforms to CE regulations		

* Optional 16L/min, 1 Bar

Span

The working temperature range is -82 to ambient (-112°F .. ambient)

Accuracy

The set point can be set in steps of 0.1°. The overall system accuracy is ±0.05°K

Temperature readout

Standard available in °C, on request in °F.

Pump

A pressure pump provides circulation in the bath or via an external circuit. The pressure of the pump is 300 mBar at 10 litres per minute.

Optional

- Remote control via RS232
 - Pump higher capacity

02T3025
24T0399

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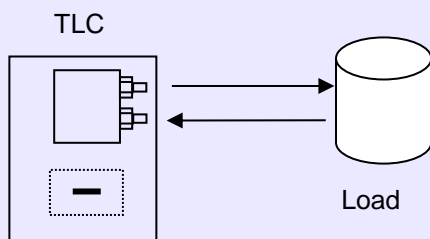
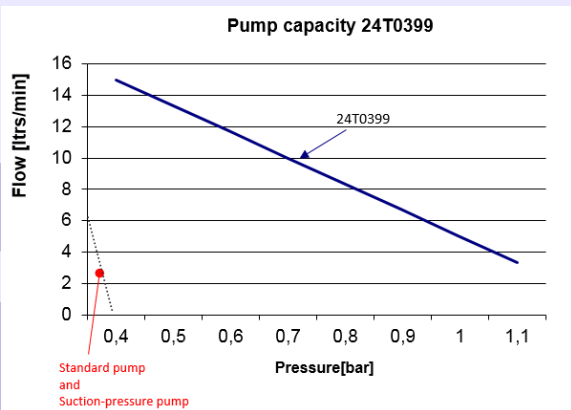
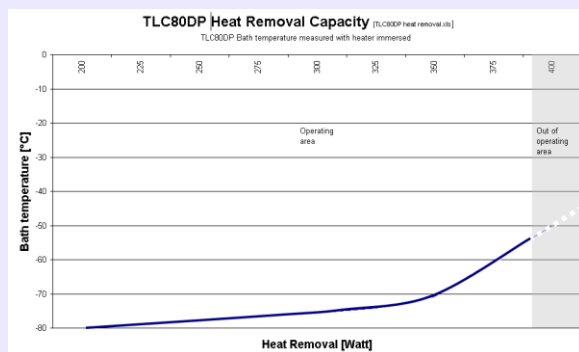
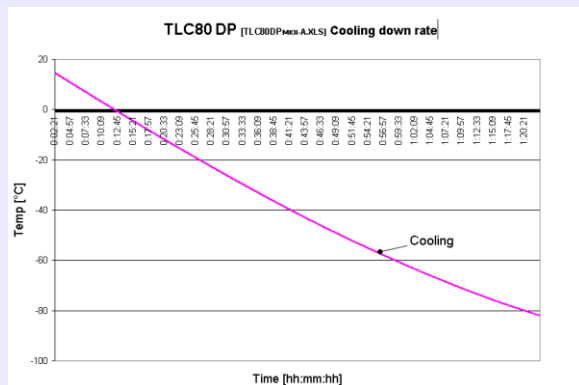
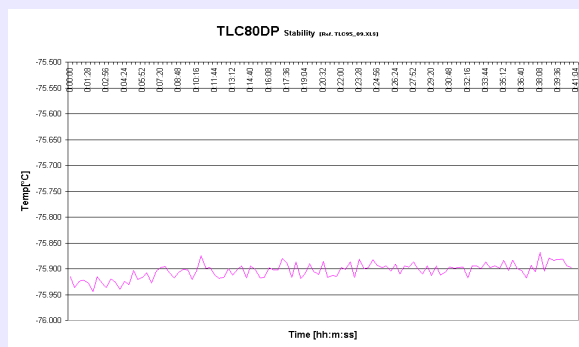
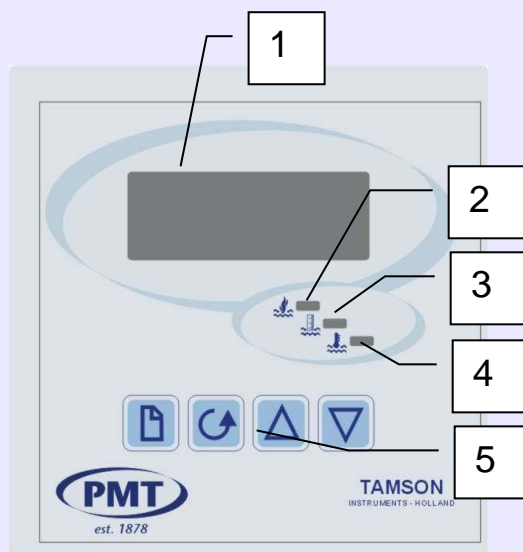
Operating the TLC80-14 DP

- 1 - LED Temperature display
- 2 - Indicator heating
- 3 - Indicator level control
- 4 - Indicator over temperature safety
- 5 - Keypad

The TLC80-14DP apparatus is easy to operate. Simply pressing the up/down keys will set the desired working temperature (SP). Auto tune can be started manually and PID parameters can be read out afterwards or set manually. The SP can be set in steps of 0.1°C. The bath temperature or process value (PV) is displayed with a resolution of 0.1°C. The stability of the temperature control is better than $\pm 0.05^\circ\text{C}$, as can be seen in the graph.

The bath is standardly equipped with a 90W stirrer/pump combination (10 ltr max .. 0.3bar max).

Optional available is a stronger pump with adjustable flow of maximal 16 litres per min. Part number is 24T0399. This pump is for circulating purposes where a constant external flow with higher pressure up to 1 bar is required. Please check our specification sheet for all pump performance details.



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