

Optima™ Series, Stirred Thermostatic Baths and Heating Circulators

TX150-ST26



TXF200-ST38



T100-ST5



TX150-ST18



TC120-ST12



T100-P5



T100-P12 with lid

A cost-effective range of multi-purpose systems combining Grant's legendary quality and reliability. Precise temperature control for a wide range of laboratory applications.

- Accurate and safe temperature control — for samples and users
- Intuitive programming and thoughtful design features — makes working with Grant stirred baths and circulators easy
- Robust, durable construction — for longevity, reliability and long-term low cost of ownership
- A complete range — 32 models to cover basic through to sophisticated needs, each model represents excellent value for money

Applications:

Grant stirred baths and circulators provide a source of precision heating and cooling for many routine and sensitive analytical procedures including sample incubation, calibration and quality control testing. All models from the TC120 upwards are suitable for use as both open and closed loop circulators (i.e. remote vessel open or closed).

For more powerful heating requirements, i.e. above 200°C, contact Grant for advice.

Model selection :

Any of the four Grant Optima™ digital thermostats can be combined with any of eight Grant tanks (five stainless steel and three plastic) to provide a choice of 32 models.

Optima™ Series, Heating Circulators Specifications

T100



TC120



TX150



TXF200



SPECIFICATIONS



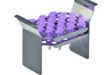





























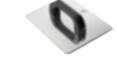
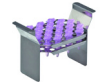








Grant Optima™ Heating Circulators Specifications		General purpose Digital		Digital High Performance	
		T100	TC120	TX150	TXF200
Stability (DIN 12876) @ 70°C	°C	± 0.05°C	± 0.05	± 0.01	± 0.01
Uniformity (DIN 12876) @ 70°C	°C	± 0.1	± 0.1	± 0.05	± 0.05
Setting resolution	°C	0.1	0.1	0.1 (0.01 with Labwise™)	
Display		4 digit LED		full colour QVGA TFT	
Timer function		–	1 to 6000 mins	1 min to 99 hrs 59 mins	
No. preset temperatures		3	3	3	3
Two point re-calibration		+	+	+	+
Offset adjustment		–	–	+	+
Socket for external probe (TXPEP, TXSEP)		–	–	+	+
Communication interface		–	–	USB & RS232	USB & RS232
Programmable		–	–	remote via PC 1 program/ 30 segments	direct via user interface or remote via PC/laptop 10 programs / 100 segments
Relays		–	–	1	1
Safety	overtemperature	fixed	adjustable cut-out		
Safety	fluid level — float switch	+	+	+	+
Alarms (can be configured to switch a relay)		–	–	high and low	high and low
Heater power	230 V kW	1.3	1.3	1.9	1.9
Electrical power	230 V kW	1.4 (50–60 Hz)	1.4 (50 Hz)	2.0 (50 Hz)	2.0 (50–60 Hz)
Height above tank rim	mm	200	200	200	200
Depth below tank rim	mm	135	135	135	135
Grant Optima™ thermostat pumps (integral)					
Maximum pressure	water mbar	–	210	310	530
Maximum flow	water L/min	–	16	18	23 (adjusted flow rate)
Pipe bore	inlet/outlet mm	–	6.11	6.11	6.11
Dimensions (H × D × W)	mm	315 × 145 × 115			
CATALOGUE NUMBERS		T100 EURO	TC120 EURO	TX150 EURO	TXF200 EURO



Optima™ Series, Water Bath Combinations and Accessories

Capacity (L) Outer tank dimensions	<ul style="list-style-type: none"> Working area (L × W) Min/max liquid depths Inner tank dimensions (L × W × H) Overall dimensions incl. controller (L × W × H) 	T100 Temperature setting range	TC120 Temperature setting range	TX150 Temperature setting range	TXF200 Temperature setting range
ST5 – 5 L stainless steel h: 200 mm d: 330 mm w: 180 mm 3 kg <i>Cat.num.: STL5</i>	<ul style="list-style-type: none"> 150 × 150 mm 85/140 mm 300 × 150 × 150 mm 330 × 180 × 395 mm 	T100-ST5 amb.+15 to 100°C	TC120-ST5 0 to 120°C	TX150-ST5 0 to 150°C	TXF200-ST5 0 to 200°C
ST12 – 12 L stainless steel h: 200 mm d: 360 mm w: 330 mm 4.5 kg <i>Cat.num.: STL12</i>	<ul style="list-style-type: none"> 205 × 300 mm 85/140 mm 325 × 300 × 150 mm 360 × 330 × 395 mm 	T100-ST12 0 to 100°C	TC120-ST12 0 to 120°C	TX150-ST12 0 to 150°C	TXF200-ST12 0 to 200°C
ST18 – 18 L stainless steel h: 200 mm d: 540 mm w: 330 mm 7 kg <i>Cat.num.: STL18</i>	<ul style="list-style-type: none"> 385 × 300 mm 75/130 mm 505 × 300 × 150 mm 540 × 330 × 395 mm 	T100-ST18 0 to 100°C	TC120-ST18 0 to 120°C	TX150-ST18 0 to 150°C	TXF200-ST18 0 to 200°C
ST26 – 26 L stainless steel h: 225 mm w: 330 mm d: 540 mm 7.5 kg <i>Cat.num.: STL26</i>	<ul style="list-style-type: none"> 385 × 300 mm 125/180 mm 505 × 300 × 200 mm 540 × 330 × 405 mm 	T100-ST26 0 to 100°C	TC120-ST26 -15 to 120°C	TX150-ST26 -15 to 150°C	TXF200-ST26 -15 to 200°C
ST38 – 38 L stainless steel h: 225 mm d: 730 mm w: 330 mm 11 kg <i>Cat.num.: STL38</i>	<ul style="list-style-type: none"> 575 × 300 mm 125/180 mm 690 × 300 × 200 mm 730 × 333 × 405 mm 	T100-S38 0 to 100°C	TC120-S38 -15 to 120°C	TX150-S38 -15 to 150°C	TXF200-S38 -15 to 200°C
P5 – 5 L plastic h: 180 mm d: 240 mm w: 330 mm 2.5 kg <i>Cat.num.: PLS</i>	<ul style="list-style-type: none"> 120 × 150 mm 85/140 mm 240 × 160 × 150 mm 390 × 200 × 360 mm 	T100-P5 amb.+15 to 99°C	TC120-P5 amb.+15 to 99°C	TX150-P5 amb.+15 to 99°C	TXF200-P5 amb.+15 to 99°C
P12 – 12 L plastic h: 180 mm d: 415 mm w: 350 mm 3.5 kg <i>Cat.num.: PL12</i>	<ul style="list-style-type: none"> 210 × 280 mm 85/140 mm 325 × 280 × 150 mm 415 × 350 × 360 mm 	T100-P12 amb.+5 to 99°C	TC120-P12 amb.+5 to 99°C	TX150-P12 amb.+5 to 99°C	TXF200-P12 amb.+5 to 99°C
P18 – 18 L plastic h: 180 mm d: 600 mm w: 365 mm 5 kg <i>Cat.num.: PL18</i>	<ul style="list-style-type: none"> 280 × 325 mm 85/140 mm 510 × 290 × 150 mm 600 × 350 × 380 mm 	T100-P18 amb.+5 to 99°C	TC120-P18 amb.+5 to 99°C	TX150-P18 amb.+5 to 99°C	TXF200-P18 amb.+5 to 99°C
OPTIONS AND ACCESSORIES					
Labwise™ PC software (optional)					
Allows two-way communication for status display, programming and data capture (see p. 16.1 for more information)	-	-	+	+	
External probes (optional)					
for monitoring and controlling temperature of remote loads					
FF17 flexible nylon probe, 2 m cable 100 mm × Ø 4.5 mm	-	-	+	+	
LL17 stainless steel probe, 2 m cable 125 mm × Ø 5 mm	-	-	+	+	
Remote switching device (optional)					
For switching appliances on and off (up to max. 8 Amps)	-	-	1	2	
Vertical turbine pumps (optional)*					
Low noise, compact design. Supplied with pipe connections and special lid for fitting to tank, pipe bore 12.7 mm					
VTP 1 max. pressure 1,000 mbar max. flow 9 L/min	+	Required only where application demands a higher pressure than that delivered by the internal pump to maintain flow			
VTP 2 max. pressure 1,650 mbar max. flow 12 L/min	+				

Optima™ Series, Water Bath Accessories

ACCESSORIES						
	Lids to help reduce evaporation/heat loss and avoid sample contamination	Rack systems* to optimise use of available bath capacity (no. of racks accommodated)	Raised shelves to allow shallow vessels to be accommodated	Accessory cooling systems to allow systems to operate at or below room temperature by means of a cooling coil dipped into the bath; designed for minimal impact on working area		
				Refrigerated immersion coolers Consist of a cooling coil connected to a refrigeration unit by a flexible pipe. Extract heat continuously, with the bath control unit controlling temperature	Heat exchange coil Designed to be attached to a supply of cooling tap water or a refrigerated circulator	
				C1G (0 to 40°)	C2G (-15 to 40°C)	CW5 (2°C above coolant temperature)
ST5 – 5 L stainless steel 3 kg h: 200 mm l: 330 mm w: 180 mm 	STL5 flat stainless steel 	1 × QR* 	–		–	
ST12 – 12 L stainless steel 4.5 kg h: 200 mm l: 360 mm w: 330 mm 	STL12 gabled, hinged (removable) stainless steel 	2 × VR* 	RS14 		–	
ST18 – 18 L stainless steel 7 kg h: 200 mm l: 540 mm w: 330 mm 	STL26 gabled, hinged (removable) stainless steel 	4 × VR* 	RS22 		–	
ST26 – 26 L stainless steel 7.5 kg h: 255 mm l: 540 mm w: 330 mm 	STL26 gabled, hinged (removable) stainless steel 	4 × VR* 	RS28 			
ST38 – 38 L stainless steel 11 kg h: 255 mm l: 730 mm w: 330 mm 	STL38 gabled, hinged (removable) stainless steel 	6 × VR* 	RS28 or RS38 			
P5 – 5 L plastic 2.5 kg h: 180 mm l: 240 mm w: 330 mm 	PL5 flat, stainless steel 	1 × OR* 	–	–	–	–
P12 – 12 L plastic 3.5 kg h: 180 mm l: 415 mm w: 350 mm 	PL12 curved plastic 	2 × VR* 	RS14 	–	–	–
P18 – 18 L plastic 5 kg h: 180 mm l: 600 mm w: 365 mm 	PL18 curved plastic 	4 × VR* 	RS22 	–	–	–

* — for Rack Systems description see 68