

LT ecocool™ energy efficient Refrigerated/heated circulating baths

A new range of innovative, eco-friendly, refrigerated heated circulating baths offering significant running cost savings whilst delivering powerful cooling. Consisting of three models, all products in the LT ecocool™ range are supplied assembled as ready to use kits, complete with accessory hosing*, clips and connectors as standard.

- Choice of three models, temperature range -30°C to 200°C* (model dependent)
- Industry leading 4 year warranty with Grant renowned service and support, no registration required
- Active cooling through the whole temperature range
- True energy saving of up to 80% against standard compressor units



* Temperature range of hosing supplied: -40°C to 100°C (can be cut to length as required). Supplied tubing 2 x 1.5m ID 9mm Ø
 † LT ecocool™ 200: 230V available late 2016






Applications:

- Pharmaceutical - mini pilot plant reactors
- Education - rotary evaporator cooling, replacement of running tap water cooling, immersing small samples, photometry, chromatography systems
- Industrial - QC testing, sample preparation, general cooling, reaction chemistry, temperature control, semi-conductor manufacturing, rheometry
- Food - refractometry
- Life-science - electrophoresis cooling
- High temperature cooling - active up to 200°C

Refrigerated/heated circulating baths » Models, options and accessories

LT ecocool™ refrigeration range – Models and specifications

			LT ecocool™ 100	LT ecocool™ 150	LT ecocool™ 200*
			 h: 640mm d: 430mm w: 245mm weight: 29kg	 h: 640mm d: 430mm w: 245mm weight: 29kg	 h: 640mm d: 430mm w: 245mm weight: 29kg
Temperature range	°C		-20 to 100	-25 to 150	-30 to 200
Temperature stability	±°C		0.05	0.02	0.01
Flow rate (max)	L/min		17	14 - 22 (adjustable)	
Pump pressure (max)	mbar		250	530	530
Tank volume	L		5	6	
Working Area (d x w)	mm		118 x 154		
Min/Max liquid level	mm		85/145	130/145	
Calibration points			2	5	
Cooling power (typical)	@ 20°C	W	250	400	500
	@ 10°C	W	230	330	430
	@ 0°C	W	185	200	300
	@ -10°C	W	115	109	140
	@ -20°C	W	40	60	75
Programs			-	1 x 30 segments Labwise™ required	10 x 100 segments
Communication interface			-	USB	
Temperature probe socket			-	6 pin mini DIN	
Display			4 digit LED	Full colour QVGA TFT	
Languages			-	EN, FR, DE, IT, ES	
Timer			1 min to 99 hrs 59 mins		
Temperature presets			3		
Alarms			High	High and low	
Electrical power (max) W	120V/230V		2160/2070 (60/50 Hz)	2280/2760 (50-60 Hz)	-/2760 (50-60 Hz)
Safety			Adjustable over temperature cut-out		
Ready to use kits			Assembled and supplied with standard tubing, insulation, clips and connectors		

* available late 2016. Grant Instruments retain the right to amend or change product information without prior notice.

Refrigerated/heated circulating baths » Models, options and accessories

Options and accessories

Labwise™ PC software (optional)

Allows two-way communication for status display, programming and data capture (see page 3.1. for more information). USB cable provided

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External probes

PEP plastic probe

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SEP stainless steel probe

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Vertical turbine pumps (optional) - when pump is fitted, available working area is reduced.

Low noise, compact design. Supplied with pipe connections and special lid for fitting to tank, pipe bore 12.7 mm.

VTP1-LT

maximum pressure

1000 mbar

maximum flow

9 L/min



Required only where application demands a higher pressure than that delivered by the internal pump to maintain flow.

Note: The optional VTP pumps will transfer additional heat to the baths and reduce the net cooling power of the refrigeration unit. The above figures must be taken into consideration when choosing the refrigeration unit. when ordering a VTP pump, please specify which refrigeration base unit it is to be used with.

VTP2-LT

maximum pressure

1650 mbar

maximum flow

12 L/min



Note: Other sizes of heat exchange coil can be made to your specification, contact Grant for further information.

Heat exchange coil

CW5 Other sizes of heat exchange coil can be made to your specification, contact us for further information



Temperature range: 2°C above the temperature of the coolant
Coil Øxl: 77x55mm
Pipe bore inlet/outlet: 7mm

Hose Kits




HOSE100 General purpose hose kit: -40°C to 100°C

HOSE200 High temperature hose kit: -50°C to 200°C



Hose kit 2 x 2m, assembled with Optima™ pump outlet plate and simple hose clips, no tools required.







High pressure pumps (optional)

			VTP pumps		Heat exchange coil
			VTP1-LT	VTP2-LT	CW5
					
Maximum pressure	water	mbar	1000	1650	-
Maximum flow	water	L/min	9	12	-
Pipe bore	inlet/outlet	mm	12.7	12.7	7
Electrical connection			10 amp IEC	10 amp IEC	-
Power consumption		W	30	40	-
Power output to liquid @ 20°C		W	15	22	-
Safety			thermal fuse	thermal fuse	-
Temperature range		°C	-	-	2°C above coolant temperature
Coil Øxl		mm	-	-	77 x 55

Options and accessories

Options and accessories

• = compatible

	LT ecocool™ 100	LT ecocool™ 150	LT ecocool™ 200	T100-R4/R5	TC120-R4/R5	TX150-R4/R5	TXF200-R4/ R5	LTC4
Labwise™ software (see section 3 for further information) 	-	•	•	-	-	•	•	•
Temperature probes, 3m cable								
TXPEP plastic probe	-	-	-	-	-	•	•	•
TXSEP stainless steel probe	-	-	-	-	-	•	•	•
PEP plastic probe		•	•			-	-	-
SEP stainless steel probe		•	•			-	-	-
VTP1-LT maximum pressure 1000 mbar maximum flow 9 L/min 	•	•	•					
VTP2-LT maximum pressure 1650 mbar maximum flow 12 L/min 	•	•	•	-	-	-	-	-
VTP1-PLR4/VTP1-PLR5 maximum pressure 1000 mbar maximum flow 9 L/min 				•	•	•	•	•
VTP2-PLR4/VTP2-PLR5 maximum pressure 1650 mbar maximum flow 12 L/min 	-	-	-	•	•	•	•	•
CW5 heat exchange coil 	•	•	•	•	•	•	•	•
IQQQ documentation	IQQQ LT ecocool™ 100	IQQQ LT ecocool™ 150	IQQQ LT ecocool™ 200	IQQQ T100 + IQQQ R4 IQQQ T100 + IQQQ R5	IQQQ TC120 + IQQQ R4 IQQQ TC120 + IQQQ R5	IQQQ TX150 + IQQQ R4 IQQQ TX150 + IQQQ R5	IQQQ TXF200 + IQQQ R4 IQQQ TXF200 + IQQQ R5	IQQQ LTC4
PQ documentation	PQ LT ecocool™ 100	PQ LT ecocool™ 150	PQ LT ecocool™ 200	PQ T100 + IQQQ R4 PQ T100 + IQQQ R5	PQ TC120 + IQQQ R4 PQ TC120 + IQQQ R5	PQ TX150 + IQQQ R4 PQ TX150 + IQQQ R5	PQ TXF200 + IQQQ R4 PQ TXF200 + IQQQ R5	PQ LTC4 + IQQQ LTC4
Extended warranty 1 year EWC1	•	•	•	•	•	•	•	•
Extended warranty 2 years EWC2	-	-	-	•	•	•	•	-

Options and accessories

Pump connectors (optional)		Part number
	Replacement plastic pump inlet/outlet connector. Fits tubing 9mm inner dia. Temp range -50°C to 200°C.	P-M6
	Replacement plastic pump inlet/outlet connector. Fits tubing 15mm inner dia. Temp range -50°C to 200°C.	P-M11
	Metal pump inlet/outlet connector, dual seal super rapid 4mm. Fits semi rigid tubing 4mm outer dia. Temp range -20°C to 100°C.	M-SR4
	Metal pump inlet/outlet connector, dual seal super rapid 6mm. Fits semi rigid tubing 6mm outer dia. Temp range -20°C to 100°C.	M-SR6
	Metal pump inlet/outlet connector, dual seal super rapid 8mm. Fits semi rigid tubing 8mm outer dia. Temp range -20°C to 100°C.	M-SR8
	Metal pump inlet/outlet connector, hose barb 7mm. Fits flexible tubing 7mm inner dia. Temp range -40°C to 120°C.	M-HB7
	Metal pump inlet/outlet connector, hose barb 9mm. Fits flexible tubing 9mm inner dia. Temp range -40°C to 120°C.	M-HB9
	Metal pump inlet/outlet connector, hose barb 12mm. Fits flexible tubing 12mm inner dia. Temp range -40°C to 120°C.	M-HB12
	Metal pump inlet/outlet plate, 1/4 " BSP/G1/4 female. Temp range -50°C to 200°C.	M-UC
	General purpose hose kit, includes 2 x 2m general purpose insulated hosing -40 to 100°C, assembled with LT ecocool™/Optima™ pump outlet plate and simple hose clips, no tools required. Can be cut to length. 10mm ID, 14mm OD.	HOSE100
	High temperature hose kit, includes 2 x 2m high temperature insulated hosing -50 to 200°C, assembled with LT ecocool™/Optima™ pump outlet plate and simple hose clips, no tools required. Can be cut to length. 8mm ID, 11mm OD.	HOSE200