

Refrigerated/heated circulating baths » LT ecocool range

# 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 two models, the LT ecocool range is supplied assembled as ready to use kits, complete with accessory hosing\*, clips and connectors as standard.

- Choice of two models, temperature range  $-25^{\circ}\text{C}$  to  $150^{\circ}\text{C}^+$  (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:  $-40^{\circ}\text{C}$  to  $100^{\circ}\text{C}$  (can be cut to length as required). Supplied tubing 2 x 1.5m ID 9mm  $\varnothing$



## 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  $150^{\circ}\text{C}$

## Refrigerated/heated circulating baths » Models, options and accessories




| LT ecocool refrigeration range – Models and specifications |           |   | LT ecocool 100   | LT ecocool 150   |
|--|-----------|---|--|--|
|  |           |   |  <p>h: 640mm<br/>d: 430mm<br/>w: 245mm<br/>weight: 29kg</p> |  <p>h: 640mm<br/>d: 430mm<br/>w: 245mm<br/>weight: 29kg</p> |
| Temperature range  | °C        |   | -20 to 100   | -25 to 150   |
| Temperature stability                                      | ±°C       |   | 0.05   | 0.02   |
| Flow rate (max)  | L/min     |   | 17   | 14 - 22 (adjustable)   |
| Pump pressure (max)  | mbar      |   | 250  | 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 | 240  | 385  |
|  | @ 0°C     | W | 200  | 205  |
|  | @ -10°C   | W | 100  | 105  |
|  | @ -20°C   | W | 30   | 60   |
| Programs   |           |   | -  | 1 x 30 segments<br>Labwise™ required   |
| 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                                   |           |   | 2160/2070 (60/50 Hz)   | 2280/2760 (50-60 Hz)   |
| Safety   | 120V/230V |   | Adjustable over temperature cut-out  |  |
| Ready to use kits  |           |   | Assembled and supplied with standard tubing, insulation, clips and connectors  |  |

## Refrigerated/heated circulating baths » Models, options and accessories







### Options and accessories

|  |   |  |  |
|--|---|--|--|
| <b>Labwise™ PC software</b> (optional)   |   |  |  |
| Allows two-way communication for status display, programming and data capture (see page 3.1. for more information). USB cable provided | -   |  |   |
| <b>External probes</b>   |   |  |  |
| <b>PEP</b> plastic probe   | -   | •  | •  |
| <b>SEP</b> stainless steel probe   | -   | •  | •  |
| <b>Vertical turbine pumps</b> (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.                      |   |  | Required only where application demands a higher pressure than that delivered by the internal pump to maintain flow.   |
| <b>VTP1-LT</b><br>maximum pressure 1000 mbar<br>maximum flow 9 L/min   |    |  | 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. |
| <b>VTP2-LT</b><br>maximum pressure 1650 mbar<br>maximum flow 12 L/min  |    |  | Note: Other sizes of heat exchange coil can be made to your specification, contact Grant for further information.  |
| <b>Heat exchange coil</b>  |   |  |  |
| <b>CW5</b> 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<br>Coil Øxl: 77x55mm<br>Pipe bore inlet/outlet: 7mm  |
| <b>Hose Kits</b>   |   |  |  |
| <b>HOSE100</b> General purpose hose kit: -40°C to 100°C<br><b>HOSE200</b> 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   |

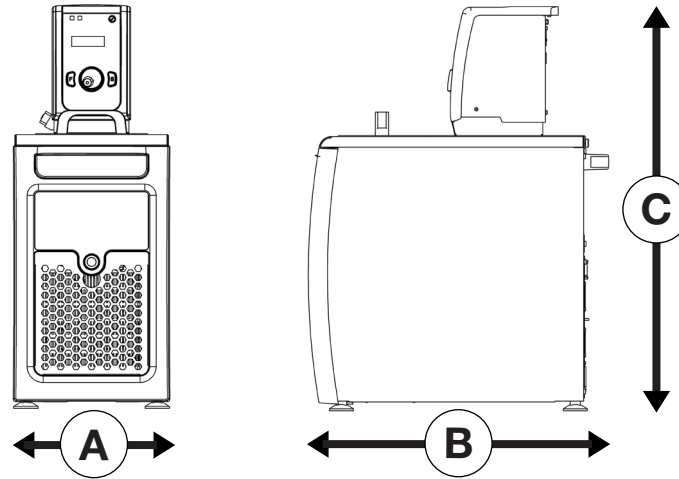
# Options and accessories

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

# Options and accessories

| Pump connectors (optional)  | Part number    |
|---|----------------|
|  <p>Replacement plastic pump inlet/outlet connector. Fits tubing 9mm inner dia. Temp range -50°C to 200°C.</p>   | <b>P-M6</b>    |
|  <p>Replacement plastic pump inlet/outlet connector. Fits tubing 15mm inner dia. Temp range -50°C to 200°C.</p>  | <b>P-M11</b>   |
|  <p>Metal pump inlet/outlet connector, dual seal super rapid 4mm. Fits semi rigid tubing 4mm outer dia. Temp range -20°C to 100°C.</p>   | <b>M-SR4</b>   |
|  <p>Metal pump inlet/outlet connector, dual seal super rapid 6mm. Fits semi rigid tubing 6mm outer dia. Temp range -20°C to 100°C.</p>   | <b>M-SR6</b>   |
|  <p>Metal pump inlet/outlet connector, dual seal super rapid 8mm. Fits semi rigid tubing 8mm outer dia. Temp range -20°C to 100°C.</p>   | <b>M-SR8</b>   |
|  <p>Metal pump inlet/outlet connector, hose barb 7mm. Fits flexible tubing 7mm inner dia. Temp range -40°C to 120°C.</p>   | <b>M-HB7</b>   |
|  <p>Metal pump inlet/outlet connector, hose barb 9mm. Fits flexible tubing 9mm inner dia. Temp range -40°C to 120°C.</p>   | <b>M-HB9</b>   |
|  <p>Metal pump inlet/outlet connector, hose barb 12mm. Fits flexible tubing 12mm inner dia. Temp range -40°C to 120°C.</p>   | <b>M-HB12</b>  |
|  <p>Metal pump inlet/outlet plate, 1/4 " BSP/G1/4 female. Temp range -50°C to 200°C.</p>   | <b>M-UC</b>    |
|  <p>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.</p>  | <b>HOSE100</b> |
|  <p>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.</p> | <b>HOSE200</b> |

**Overall dimensions**



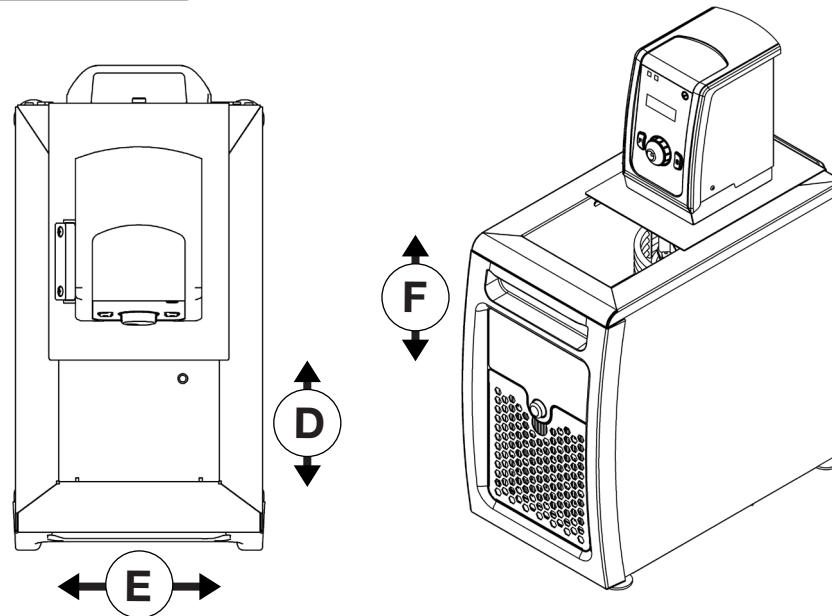
Please note images are for representation purposes only

**Packed weight:** 36.3kg  
**Product weight:** 29.1kg

**Packed dimensions:**  
A: 465mm  
B: 610mm  
C: 755mm

**Product dimensions:**  
A: 245mm  
B: 430mm  
C: 640mm

**Working area**



**Working area:**  
D: 118mm  
E: 154mm  
F: 145mm  
(10mm below top)

**LT ecocool™ 100 minimum immersion volume depth:** 85mm

**LT ecocool™ 150 minimum immersion volume depth:** 130mm

Please note images are for representation purposes only

## Vessel capacity without lid

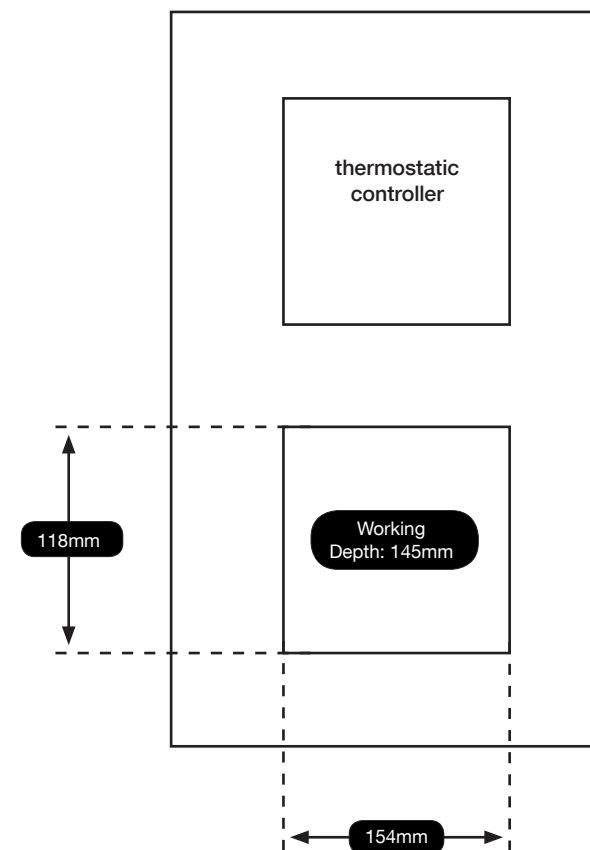
|                         |                |
|-------------------------|----------------|
| Duran 21-801: 50ml      | 9 <sup>+</sup> |
| Duran 21-801: 100ml     | 4              |
| Duran 21-801: 150ml     | 3              |
| Duran 21-801: 250ml     | 2              |
| Duran 21-801: 500ml     | 1              |
| Duran 21-801: 750ml     | 1              |
| Duran 21-801: 1000ml    | 1              |
| Duran YOUTILITY: 125ml  | 4              |
| Duran YOUTILITY: 250ml  | 2              |
| Duran YOUTILITY: 500ml  | 2              |
| Duran YOUTILITY: 1000ml | 1              |

## Vessel capacity with tank lid

|                          |    |
|--------------------------|----|
| Erlenmeyer flask: 100ml  | 4  |
| Erlenmeyer flask: 250ml  | 2  |
| Erlenmeyer flask: 500ml  | 1  |
| Erlenmeyer flask: 1000ml | 1* |

\* Bridge plate released

+ May need height support in the tank depending on fill level





**Wolflabs**

# Wolf Laboratories Limited

[www.wolflabs.co.uk](http://www.wolflabs.co.uk)

Tel: 01759 301142

Fax: 01759 301143

[sales@wolflabs.co.uk](mailto:sales@wolflabs.co.uk)



**Use the above details to contact us if this literature doesn't answer all your questions.**

**Pricing on any accessories shown can be found by keying the part number into the search box on our website.**

The specifications listed in this brochure are subject to change by the manufacturer and therefore cannot be guaranteed to be correct. If there are aspects of the specification that must be guaranteed, please provide these to our sales team so that details can be confirmed.

