



# Haven Automation Limited

Calibration Solutions for Industry

A Subsidiary of Haven Holdings Ltd.

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## Refrigerated Baths

- Temperature Range -35°C to 100°C
- 7 or 12 litre capacity
- Temperature stability up to  $\pm 0.005^\circ\text{C}$

These baths are a complete refrigerated circulating system for closed circuit applications for temperature ranges from -35 to 100°C.

Two bath capacities are available, 7 litres (RB-5A) or 12 litres (RB-12A). Temperature control is by the thermo-regulator giving four different combinations.

### COOLING (AT 20°C AMBIENT)

	RB-5A	RB-12A
Minimum Achievable Temperature (°C) *	-20	-35
Maximum Achievable Temperature (°C)	100	100
Cooling Capacity at 20°C (watts)	145	240
Cooling Capacity at 0°C (watts)	145	240
Cooling Capacity at -10°C (watts)	110	230

### Dimensions (L x W x H mm)

	RB-5A	RB-12A
Overall Size (with controller)	430 x 250 x 566	430 x 370 x 610
Liquid surface to top of the bath	65	65
Internal Dimensions	192 x 151 x 200	208 x 300 x 150
Working length to thermo-regulator	224	224
Working depth – Max/Min (mm)	180 / 135	130 / 85
Working Capacity – Max/Min (litres)	7.0 / 5.5	11.6 / 9.6

### THERMO-REGULATOR

	TE-10D	TU-20D
Temperature Selection	Digital	Digital
Temperature Stability @ 40°C (°C)	$\pm 0.01$	$\pm 0.005$
Nominal Heater Power at 120V (watts)	1000	1500
Nominal Heater Power at 230V (watts)	1000	1800
Pump Capacity (litres/min)	10	10
Pump Capacity (mbar)	145	145
Method of Control	PID	PID
Temperature Sensor	PRT	PRT
PC Interface	NO	YES Via RS-232
Software	NO	TempWorks** (Optional Accessory)

\* Using a mixture of 40% water, 40% antifreeze, and 20% alcohol to achieve -35°C

\*\*TempWorks Software has been designed for use with OTB-8 Oil/Water Baths and the TU-20D controller on the refrigerated baths. It is a Windows® based programme that connects via an RS-232 connection to your computer. Programmes can be created, saved and recalled at any time as well as running in real time mode.

Time, temperature and ramp rates can all be set up. Temperature can be set to two decimal places. Temperatures within the range of -35°C to 250°C can be programmed. Refrigeration units are available for connection to the system and can be controlled via the software.

A Refrigeration Control Pack is needed to turn the refrigeration unit "on/off" when used with the software.

