

Model 9730CR

Constant Temperature Oil Bath

Classic Line Accessory for the Laboratory



9730CR Features

- > Temperature control to $\pm 0.001^{\circ}\text{C}$
- > Temperature gradients to $\pm 0.003^{\circ}\text{C}$
- > Temperature range 0°C to 65°C
- > Solid state sensor and control system
- > Self-contained heating and cooling
- > Chamber capacity 100 litres (26 gallons)

Guildline 9730CR is a general purpose temperature oil bath developed for applications such as maintenance of standard resistors, shunts and similar laboratory standards or the research and production testing of diodes, zener references, resistors, capacitors and similar components.

The bath maintains approximately 100 litres (26 gallons) of oil at a constant and infinitely variable temperature over the range 0°C to 65°C , e.g. where it is necessary to measure the effect of small controlled temperature changes in electrical and electronic components which must be maintained at equal temperatures during their measurement. It is completely self-contained, including heating and cooling systems.

Temperature stability at any point in the bath is guaranteed to $\pm 0.002^{\circ}\text{C}$ for temperatures from ambient plus 5°C to 65°C , and to $\pm 0.005^{\circ}\text{C}$ from 0°C to ambient plus 5°C . Thermal gradients are less than $\pm 0.003^{\circ}\text{C}$. The bath has a false bottom and sides allowing a continuous oil flow all around to reduce gradients at remotest interior locations.

The 9730CR Constant Temperature Oil Bath is continuously adjustable over the entire temperature range with resolution to better than 0.001°C .

The R134a refrigerant cooling system enables the unit to operate at temperatures down to 0°C . The heating system provides four heating capacities of 100, 200, 300, and 600 watts.

An over temperature limit dial is provided as a guard against the effects of a failure of temperature control. An optional thermally insulated stainless steel secondary enclosure, model 9733 approximately 24" x 15" x 9" deep is available. Construction is double walled to optimize oil flow and to minimize effects of vibration and buffeting.

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Performance Specifications

Chamber Temperature Range	0 to +65 °C
Stability	±0.002 °C (above ambient +5 °C) ±0.005 °C (below ambient +5 °C) Note: Stability specification of ±0.002 °C applies when oil temperature is (ambient +5) °C or higher For oil temperature lower than (ambient +5)°C the stability is ± 0.005°C
Temperature Adjustment	Full range continuous 4 decade dials + vernier, 0.001 °C resolution
Heating Provision	Electrical heaters: 100, 200, 300, and 600 watt capacity
Cooling Provision	R134a refrigerant compressor evaporator system
Chamber Gradients	± 0.003 °C
Chamber Access	Removable Plexiglas cover

Physical Specifications

Environment	Operating	15 °C to 30 °C < 80% RH, non-condensing
	Storage	0 °C to 60 °C < 90% RH, non-condensing
Chamber Usable Dimensions		66 cm long x 40 cm wide x 25.4 cm high (26 in. x 15.8 in. x 10 in. high)
Chamber Capacity		100 litres (26 U.S. gallons); 6100 cubic inches
Overall Dimensions		H 96.5cm (38 in) W 79 cm (31 in) D 122cm (48 in)
Weight (empty)		161 kg (355 lbs)
(shipping)		200 kg (440 lbs)
Power Supply		100, 120, 220 and 240 VAC ±10% 50/60Hz ±5%, 900 VA
Construction		Rectangular, stainless steel tank, Formica cabinet

9730CR Ordering Information

9730CR	Constant Temperature Oil Bath <i>Specify supply voltage and frequency requirement at time of order.</i>
TM9730CR	Technical Manual (included) Certificate of Calibration (included) Report of Calibration (extra charge)

Accessories:

9733	Insulated secondary enclosure adapter
50103	Over-under temperature protector
OIL-5	Mineral Oil, 20 litres (5.28 US gallons)

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