

Model 9730CR4

Large Volume Constant Temperature Oil Bath

Classic Line Accessory for the Laboratory



9730CR4 Features

- > Temperature range: 20-40°C
- > Temperature stability better than $\pm 0.001^{\circ}\text{C}$
- > Temperature gradient $\pm 0.003^{\circ}\text{C}$
- > Temperature resolution better than $\pm 0.001^{\circ}\text{C}$
- > Large working volume (91 gallons)
(344 litres)
- > Self-contained heating and cooling
- > Over-temperature protection
- > Removable clear plexiglas cover

Guildline Model 9730CR4 oil bath has been primarily designed for maintaining standard resistors and providing a constant temperature environment for temperature sensitive devices. The highly sophisticated "push-pull" heating cooling system, a multiple thermistor control system and a unique impeller/stator design achieves the best performance realizable in a commercially available bath. It combines a large working volume with exceedingly stringent temperature stability and gradient specifications 30-day stability is $\pm 0.001^{\circ}\text{C}$ and gradients are less than $\pm 0.003^{\circ}\text{C}$ across a volume nearly one meter across and $\frac{1}{2}$ meter deep.

Temperature setting is continuously adjustable from 20^o to 40 °C, by means of a four decade thumbwheel switch and a calibrated vernier that provides resolution of better than 0.001 °C. An over temperature limit dial, calibrated in 5 °C increments, is provided for protection against failure or incorrect setting of temperature control, and consequent increase in oil temperature above a safe limit.

The 9730CR4 Constant Temperature Oil Bath is continuously adjustable over the entire temperature range until resolution and stability to better than 0.001°C.

The R134a refrigerant cooling system provides improved stability and control below ambient temperatures. The heating system provides heating capacities of 150 or 300 watts.

The oil is contained in an insulated stainless steel tank with a capacity of 344 litres. An impeller below a perforated false bottom in the tank moves the oil continuously upward all around the outside vertical surface of the tank in a cycle that is approximately 6 seconds long.

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Performance Specifications

Chamber Temperature Range	20 to 40 °C
Stability	Better than ± 0.001 °C for 30 days. ± 0.01 °C over 1 year
Temperature Adjustment	Full range continuous 4 decade dials + vernier, 0.001 °C resolution
Heating Provision	Electric heater: 150, 300 watt capacity.
Cooling Provision	Self-contained R134a refrigerant compressor evaporator system.
Chamber Gradients	± 0.003 °C
Chamber Access	Removable Plexiglas cover
Temperature Control	Thermistor sensor, patented circuit controlling heater via a zero crossing SCR.
Over Temperature Control	Dial setting 20 °C to 45 °C, continuous. Disables heater and compressor.

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		96.5 cm diameter x 38 cm above false floor (38 in. x 15 in.)
Chamber Capacity		344 litres (91 U.S. gallons); 21, 020 cubic inches.
Overall Dimensions		H 91.5 cm (36 in.) W 122.4 cm (48.2 in.) D 138.2 cm (54.4 in.)
Weight (empty)		218 kg (480 lbs)
(shipping)		282 kg (620 lbs)
Power Supply		100, 120, 220 and 240 VAC $\pm 10\%$ 50/60Hz $\pm 5\%$, 900 VA, 500 watts maximum.
Construction		Circular stainless-steel tank, Formica cabinet.

9730CR4 Ordering Information

9730CR4 Large Volume Constant Temperature Oil bath,
Floor Model
*Specify supply voltage and frequency
requirement at time of order.*

TM9730CR4 Technical Manual (included)
Certificate of Calibration (included)
Report of Calibration (extra charge)

Accessories:

50103 Over-under temperature protector
OIL-5 Mineral Oil, 20 litres (5.28 US gallons)

Guildline is distributed by:

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