

Model 9732VT

## Bench Type Constant Temperature Oil Bath

Classic Line Accessory for the Laboratory



### 9732VT Features

- > *Temperature stability  $\pm 0.0025^{\circ}\text{C}$*
- > *Temperature gradients  $\pm 0.005^{\circ}\text{C}$*
- > *Compact 47 litre (12.5 gallon) design for bench mounting use*
- > *Self-contained heating and cooling*

**G**uildline Model 9732VT oil bath is a bench type oil bath for maintaining standard resistors and shunts at a constant temperature. It employs a highly precise solid state temperature control to achieve a temperature stability of  $\pm 0.0025^{\circ}\text{C}$  long term at any point over a temperature range of ambient minus  $5^{\circ}\text{C}$  to  $+65^{\circ}\text{C}$ . Thermoelectric cooling is built-in for use near ambient temperatures. Heater power of 100 or 200 watts may be selected by a switch.

Temperature is continuously adjustable over the full range by means of a four decade thumb wheel switch, plus a fifth continuously variable dial. Temperature control is achieved by a patented thermistor detector incorporated into an AC switching circuit.

The switching circuit fires silicon controlled rectifiers which power the heating elements. The temperature control has a "dead zone" and resolution of adjustment to better than  $0.001^{\circ}\text{C}$ . Dial setting vs. temperature chart, in  $1^{\circ}\text{C}$  increments, is supplied with the oil bath over its temperature range. Intermediate temperatures may be interpolated or measured directly to  $0.001^{\circ}\text{C}$  by means of an external thermometer.

***The 9732VT provides high temperature stability over a wide temperature range in a compact bench mountable enclosure.***

Tank is stainless steel and thermally insulated to keep temperature gradients at less than  $0.005^{\circ}\text{C}$ . Exterior is Formica. The impeller drive motor is mounted above the tank. The oil flow in the bath is designed for optimum uniformity of temperature.

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## Performance Specifications

<b>Chamber Temperature Range</b>	(Ambient -5) <sup>o</sup> to +65 °C
<b>Stability</b>	± 0.0025 °C
<b>Temperature Adjustment</b>	Full range continuous four decade dials + vernier 0.001 °C resolution
<b>Heating Provision</b>	Electrical heaters: 100, 200 watt capacity
<b>Cooling Provision</b>	Thermoelectric
<b>Chamber Gradients</b>	± 0.005 °C
<b>Temperature Control</b>	Thermistor sensor, patented circuit controlling heater via a zero crossing SCR
<b>Over Temperature Control</b>	None
<b>Chamber Access</b>	Removable Plexiglass cover

## Physical Specifications

<b>Environment</b>	Operating Storage	18 °C to 28 °C < 80% RH, non-condensing 0 °C to 60 °C < 90% RH, non-condensing
<b>Chamber Usable Dimensions</b>		38 cm long x 32.5 cm wide x 20.3 cm high (15 in. x 12.8 in. x 8 in.)
<b>Chamber Capacity</b>		47 litres (12.5 U.S gallons); 2888 cubic inches
<b>Overall Dimensions</b>		H 36.6 cm (14.4 in.) W 45 cm (17.7 in.) D 92.5 cm (36.4 in.)
<b>Weight (empty) (shipping)</b>		48 kg (105 lbs) 65 kg (144 lbs)
<b>Power Supply</b>		100, 120, 220 or 240 VAC, 50/60Hz, 400 VA
<b>Construction</b>		Rectangular stainless-steel tank, Formica cabinet.

## 9732VT Ordering Information

9732VT	Bench Type Constant Temperature Oil bath <i>Specify supply voltage and frequency requirement at time of order.</i>
TM9732VT	Technical Manual (included) Certificate of Calibration (included) Report of Calibration (extra charge)

### Accessories:

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

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