

Heated Vapor Gas Multi-Sampler



Fig. 2



Fig. 1

This heated cell can be configured as a gas cell (Fig. 2) or for vaporizing samples that are normally solids or liquids at room temperature. Configured for gas sampling, the cell incorporates 2 valves, an inlet and an outlet, that enable flowing gas samples through the cell.

In its solid and liquid vaporization configuration, the cell has an outlet needle valve from which a vacuum can be pulled and two (2) sample inlets. One inlet is a needle septa injection port on the top of the cell which is similar to the type used in gas chromatography. There is a second inlet in the form of a side port for inserting solid samples, which also doubles as the thermocouple port. Using the side port eliminates the need to recheck vacuum seals whenever the cell is opened to insert solid samples. The 250w heating jacket extends over the end of the cell so that both the cell body and the optics are heated, and allows operation at temperatures up to 200°C. Condensation on the optics is minimized by heating them to the same temperature as the sample chamber. A type J iron constantan thermocouple is provided with plugs which are compatible with the optional temperature controller. The cell body is type 304 stainless steel and an assortment of seals is provided – silicon rubber, viton and PTFE.

Cells are factory pretested for vacuum leaks using dummy windows and then new windows are shipped with the cell. The cell comes standard with 47 x 6mm KCl windows. The clear aperture is 39mm. Other window materials are available. Requires either a cell mount (0008-5162) (Fig. 1) or base plate mount (0008-9405) (Fig. 2). An optional high stability temperature controller is available. The temperature controller has ramp and soak cycles that can be programmed on the keypad.

- 0008-5162 Cylindrical Cell Holder for Model G-2SS 10cm Stainless Steel Gas Cell, Model G-3 PTFE 10cm PTFE Gas Cell and 10cm Vapor Gas Multi-Sampler
- 0007-5546 10cm Vapor Gas Multi-Sampler with sheathed Iron Constantan 304SS type J thermocouple, KCl windows-115V
- 0007-5547 10cm Vapor Gas Multi-Sampler with sheathed Iron Constantan 304SS type J thermocouple, KBr windows-115V
- 0007-8032 10cm Vapor Gas Multi-Sampler with sheathed Iron Constantan 304SS type J thermocouple, KCl windows-220V
- 0007-8033 10cm Vapor Gas Multi-Sampler with sheathed Iron Constantan 304SS type J thermocouple, KBr windows-220V
- 0007-7405 10cm Heated Gas Cell, KCl windows, two Swagelok® valves, type J Iron Constantan thermocouple-115V
- 0007-7406 10cm Heated Gas Cell, KBr windows, two Swagelok® valves, type J Iron Constantan thermocouple-115V
- 0007-8034 10cm Heated Gas Cell, KCl windows, two Swagelok® valves, type J Iron Constantan thermocouple-220V
- 0007-8035 10cm Heated Gas Cell, KBr windows, two Swagelok® valves, type J Iron Constantan thermocouple-220V
- 0017-5548 High Stability PID Digital readout Temperature Controller, 115 volts
- 0017-4804 High Stability PID Digital readout Temperature Controller, 230 volts, CE marked
- 0008-9405 Base Plate Mounting Option for Heated Vapor Gas Multi-Sampler/Heated Gas Cell

0017-4804, High Stability PID Digital readout Temperature Controller, 230 volts, CE marked



rear. It can control loads up to 15 amps and is available in 115 volt and 230 volt versions.

ICL's benchtop PID algorithm temperature controller is ideal for all applications in a spectroscopy lab. We have used several of these units in our crystal growth R&D lab for years and have found them to be rugged, easy to use, portable, versatile and reliable. We recommend this unit for any application and it is designed to operate with our Heated Platens (0012-6664), Heated Vapor Gas Multi-Sampler (0008-5546), Heated Gas Cell (0008-7405), the Heater Jacket for our long path gas cells (0008-7329) and our Mars™, Mercury™, Venus™, Earth™ and Saturn™ Cells. The temperature controller is keypad programmable and all electrical connections and outputs are from the rear. It can control loads up to 15 amps and is available in 115 volt and 230 volt versions, each of which operates at either 50 or 60 Hertz. Temperatures can be controlled within +/- 1.0° C or +/- 0.1% of the readout span. Digital readouts are shown on an illuminated fluorescent display. Sensor options are type J, K, N, R, S, T, B and E thermocouples. Type J is standard and included with the unit. Temperature can be displayed in °C, °F, °K, °Re and °Ra. The default setting is °C. Programmable features include multiple profiles with multiple ramp and soak segments per profile and high and low temperature alarms. This unit features a PID autotune, which automatically tunes and optimizes the Proportional Band (P), the Integral time (I) and the Derivative rate (D).