V&P SCIENTIFIC, INC.
Innovators in Liquid Handling, Arraying and Mixing

TECHNICAL NOTE 99

TEMPERATURE CONTROL FOR 180C HEATING BLOCK

The VP 741A Heating Block is designed to operate between 21°C and 180°C. It has two 400 watt cartridge heating elements that are controlled by a Series 93, Watlow microprocessor-based temperature control. The Series 93 Users Manual is at Appendix A and contains detailed instructions for advanced operation. Basic temperature control is set to operate in the range from 21°C to 180°C. To set the desired temperature, simply press either the up or down arrows on the display to increase or decrease the temperature setting (bottom display). The Watlow Control is capable of more sophisticated control features such as ramping the temperature. We recommend you read the Series 93 Users Manual for these advanced features.

For fastest heat transfer use water or oil in the heat block cavity. Although the Heat Block will be at the temperature on the display, the actual temperature of specimens in the microplate wells will be 3°C to 5°C below this temperature depending upon how efficient the heat transfer condition is that you provide. We recommend that you measure the temperature in your wells to determine your conditions and settings.

To protect the Tumble Stirrer deck we have placed a millboard lining on the bottom of the heating block. We have also placed 2 alignment pins to locate the heat block on the Tumble Stirrer deck, see below.

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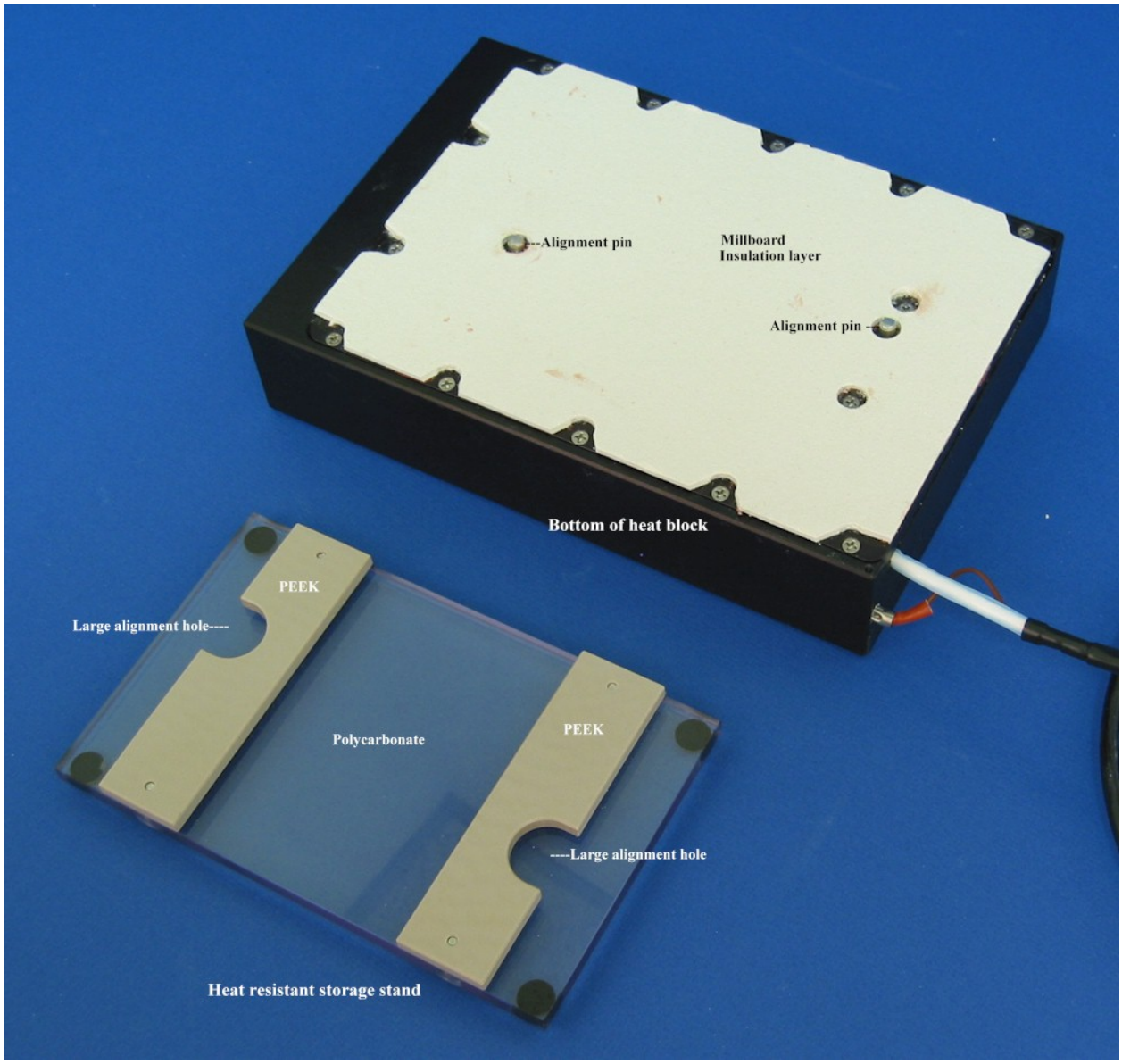

Bottom view of heat block demonstrating alignment pins and insulation layer of Millboard. Also shown is a storage stand which can be used to hold the heat block when it is not on the Tumble Stirrer.

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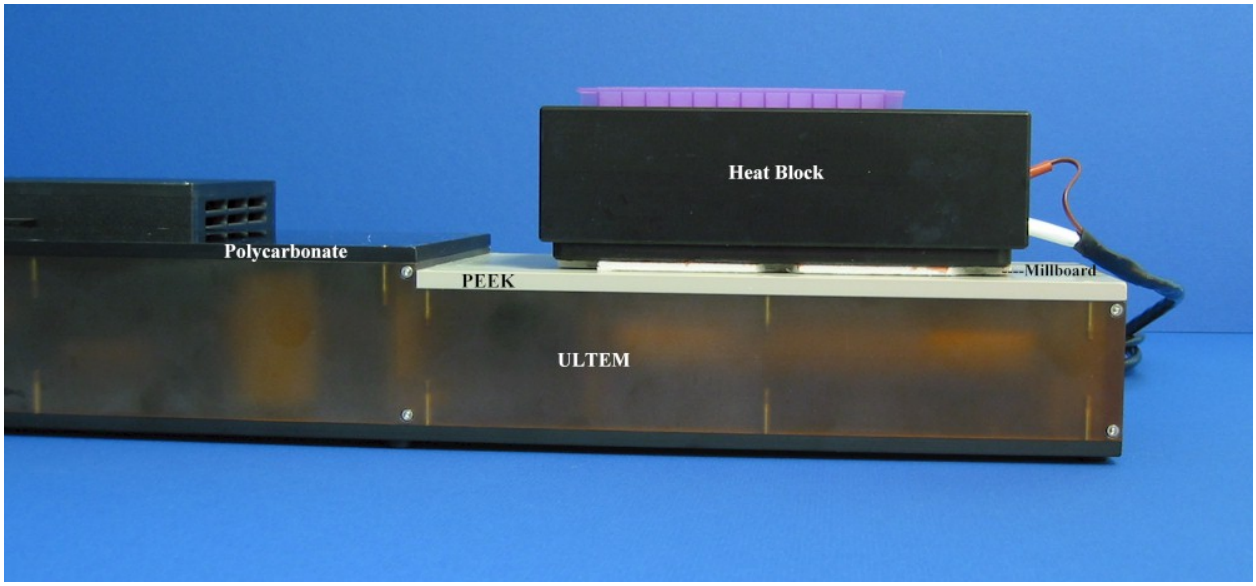

Side view of the heat block on a Tumble Stirrer.

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