

MODEL K29M

Triple Point of Water Maintenance System

Nearly all precision thermometry requires the frequent realization of the Triple Point of Water (TPW) - the defining fixed point used as the basis for all radiometric calculations using Standard Platinum Resistance Thermometers (SPRTs).

With Pond Engineering's K29M system, users can realize and maintain an ice mantle in a TPW cell for extended time periods with little periodic intervention. A Type 304 stainless steel vacuum envelope surrounds the thermoelectrically cooled heat pipe to prevent heat transfer between the environment and the TPW cell. An integrated command function allows users to periodically initiate residual gas scavenging in the vacuum jacket, ensuring years of peak performance. A replaceable desiccant prevents moisture accumulation and corrosion around the thermoelectric cooler, a common problem with other maintenance systems.

Interactive controls on a sloping front improve usability in a stand-alone configuration. The system's dry well construction eliminates much of the maintenance required with water bath systems while still providing virtually unlimited mantle lifetimes with minimum user intervention.

Standard features include a microprocessor controller and universal input power supply, so the unit operates properly with virtually any commercial A.C. power worldwide. Intrinsic safety features prevent the user from completely freezing and therefore destroying a TPW Cell. Interactive control sensor calibration functions make it easy for users to maintain optimal performance throughout the system's life. Special configurations of the K29M are available for many non-standard TPW Cells, including the nearly 4" longer Japanese cells.



SPECIFICATIONS

System Operating Range:	15°C to 30°C (non-condensing)
Main Well:	Type 304 Stainless Steel ≈2.45" (67 mm) I.D. ≈16.3" (41 cm) deep
Pre Cool Well:	Type 304 Stainless Steel ≈0.33" (8.0 mm) I.D. ≈15.0" (38 cm) deep
Power Requirements:	90 to 264 Volts 1.5 Amps max. A.C. 47 - 63 Hz.
Cabinet Physical Dimensions:	12" (30.5 cm) wide 8.5" (21.6 cm) deep 18" (45.7 cm) high

This system is compatible with standard size commercially available cells and can be ordered to work with almost any Triple Point of Water cell.

TO ORDER, OR FOR MORE INFORMATION:

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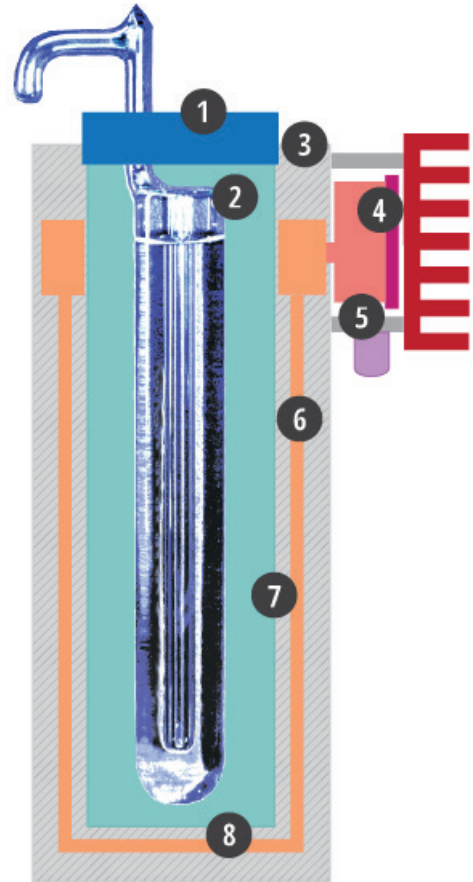
EMAIL – info@pondengineering.com

All specifications subject to change without notice.

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KEY TECHNICAL FEATURES

- 1 Interchangeable cell top for use with either Type A or Type B cells
- 2 Dry well eliminates the need for additives to prevent algae / bacteria growth
- 3 Stainless Steel construction ensures long service life and durability
- 4 Solid state thermoelectric cooling with no moving parts requires no maintenance
- 5 Sealed chamber surrounding TE cooler and heat pipe condenser protects cold components from corrosion damage. Replaceable desiccant allows for inspection and ensures that cold components stay dry and corrosion free
- 6 Vacuum insulation outside the heat pipe allows use of a small, low power cooling module and drive electronics, less than 40 watts total power consumption
- 7 Vacuum insulation inside the heat pipe allows the cell to float at the TPW temperature and protects the cell from damage regardless of heat pipe temperature
- 8 Heat pipe completely surrounding the main well ensures uniform thermal guarding of main well and long mantle life



POINT OF APPLICATION

