



Advanced Refrigeration Capacity Control

OPTI TEMP® systems feature an “Advanced Refrigeration Capacity Control” (ARCC) circuitry. This industry leading patented refrigeration circuitry provides several exclusive advantages over traditional refrigeration control methods. Compare these features:

- “**zero load to full load**” capacity control: The ARCC circuitry allows the chiller to operate from Zero to Full output capacity without cycling the compressor.
- **Excellent Temperature Stability: +/- 0.1 °C**
- **Widest Operating Temperature Range in its class:** from -10 C with antifreeze to 90 °C with special materials of construction).

The OPTI TEMP® chillers are also equipped with an adjustable pressure actuated bypass valve which allows for some user adjustment of the process flow characteristics. Excess flow can be routed back to the chiller to protect the unit should a process line become pinched or blocked. Units **are available with non-ferrous or stainless materials of construction and with a wide selection of user and factory installed options and accessories.**

The OPTI TEMP® Chiller provides maximum flexibility. It can be used as a *Chiller* when the process calls for cooling, or a *heater* when the process calls heating (when equipped with an optional heater package). Simply input the desired temperature in to the digital P.I.D. controller and the unit will heat or cool as needed, automatically.

- The OPTI TEMP® Chillers use a CFC free refrigerant (on sizes OTC-.25A through OTC-3A) which is an environmentally friendly refrigerant.
- The OPTI TEMP® Chillers have **no** load to **full** load capacity control without cycling the compressor. Most other chiller manufacturers cycle the compressor at less than 50% load, which causes increased wear on the compressor and temperature instability.
- The OPTI TEMP® Chillers have **superior temperature stability** characteristics. Many chiller manufacturers provide capacity control by arranging it so that it will tend to heat up the fluid under less than full load conditions. This causes temperature instability. The refrigerant circuit of the OPTI TEMP® Chillers is arranged to provide capacity control without using refrigerant to heat the fluid.
- The OPTI TEMP® Chillers use a **microprocessor based PID temperature controller** equipped with “fuzzy” logic. This also contributes to very stable temperature control, even after load or temperature changes. The OPTI TEMP® Chillers have been tested to **control temperatures within +/- .2°F.**
- The OPTI TEMP® Chillers have a **patented refrigeration circuit** and we offer an electric heater as a standard option on every unit. So that if heating is required the unit will heat and if cooling is required the unit will cool.
- The OPTI TEMP® Chillers offer a **wide temperature range** (from 30°F with antifreeze to 190°F with special materials). Other chiller manufacturers limit the maximum operating temperature to 70°F or with special controls to 90°F, and will not allow the refrigeration system to operate above these temperatures. Thus, with the standard OPTI TEMP® Chiller, the user can merely input the desired temperature up to 130°F, with standard materials of construction, or 190°F, with special materials of construction, using the digital temperature controller. If heating is required (such as for start up to keep the fluid above the dew point), the unit will heat the fluid -- if cooling is required, the unit will provide cooling automatically.
- The OPTI TEMP® Chiller is a **true** closed loop cooling system. When used with **OPTISHIELD®** corrosion inhibitor the system is protected against galvanic corrosion, to insure maximum productivity.
- Ultra Pure, Controlled and Uncontrolled polishing loops are available with special materials of construction.