



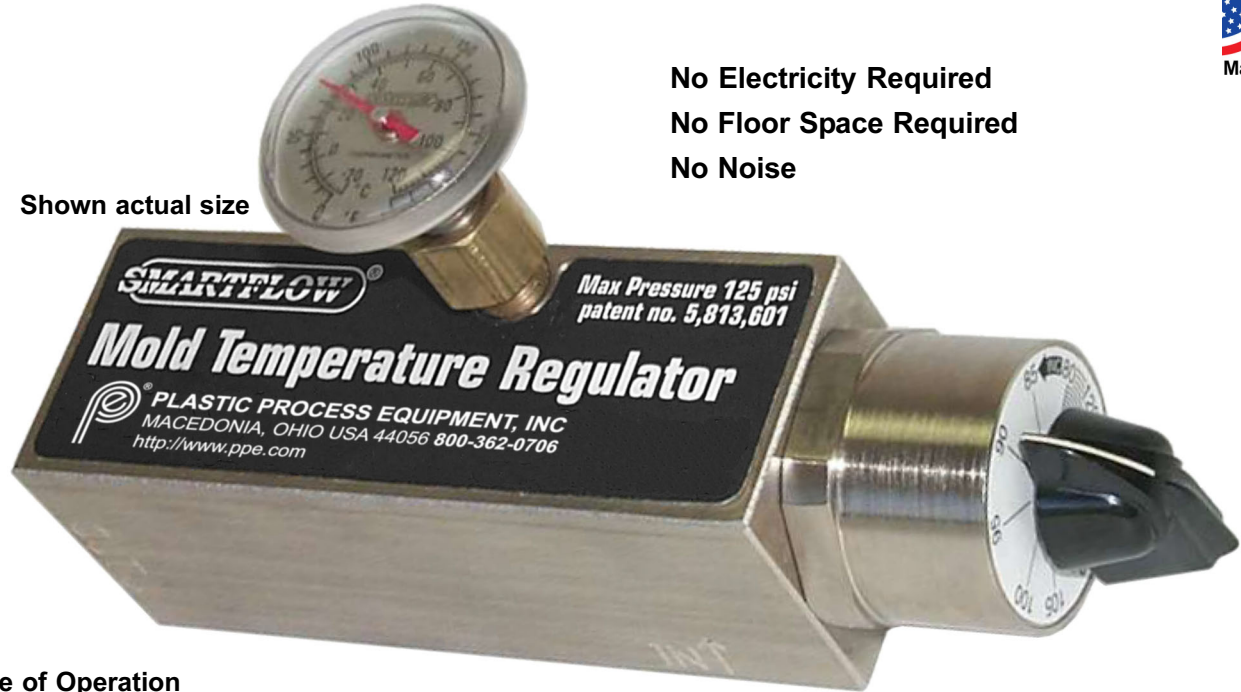
MOLD TEMPERATURE REGULATOR

COST EFFECTIVE MOLD TEMPERATURE CONTROL



- No Electricity Required
- No Floor Space Required
- No Noise

Shown actual size



Principle of Operation

The Mold Temperature Regulator works on the principle of thermal expansion. It is connected to the return lines of the mold cooling water loop. A simple bellows and range spring capsule senses the temperature of the water leaving the mold and compares it to the set point temperature. The set point is easily adjusted by rotating the pointer knob to the desired water temperature value on the calibration scale. The dial thermometer provides visual verification of the setting. Note: A discrete cooling water temperature always corresponds to a hotter mold (steel) temperature.

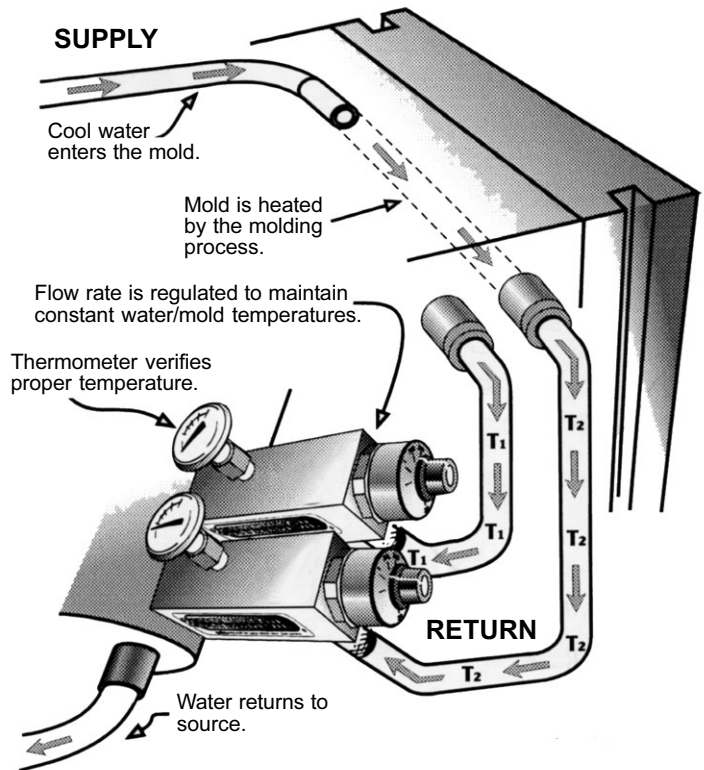
When the water temperature leaving the mold is hotter than the set point, the internal valve modulates toward open, cooling water flow rate increases and cooling water temperature decreases to stabilize at the set point. When the water temperature leaving the mold is cooler than the set point, the internal valve modulates toward close, cooling water flow rate decreases, residency time in the mold increases and cooling water temperature rises until stabilizing at the set point. The valve never completely closes.

Note: The Mold Temperature Regulator recovers waste heat energy from the resin shot and transfers it to heat the cooling water and the mold. The mold Temperature Regulator does not generate heat and it does not function as a chiller.

Also Controls Barrel Feed Throat Temperatures

Molders typically process using maximum water flow in the barrel feed throat cooling loop. This works until the ambient temperature and humidity increase to a point where condensation forms on the metal feed throat and the hydroscopic resin material begins to absorb moisture. There is a simple solution to this unacceptable problem.

Rather than spend time manually adjusting water to flow to the feed throat and periodically checking it, a molder can install PPE's Mold Temperature Regulator in the feed throat return cooling water line, set it for the process conditions and forget it. The Mold Temperature Regulator will automatically maintain the feed throat temperature at the set point.



TYPICAL APPLICATION



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