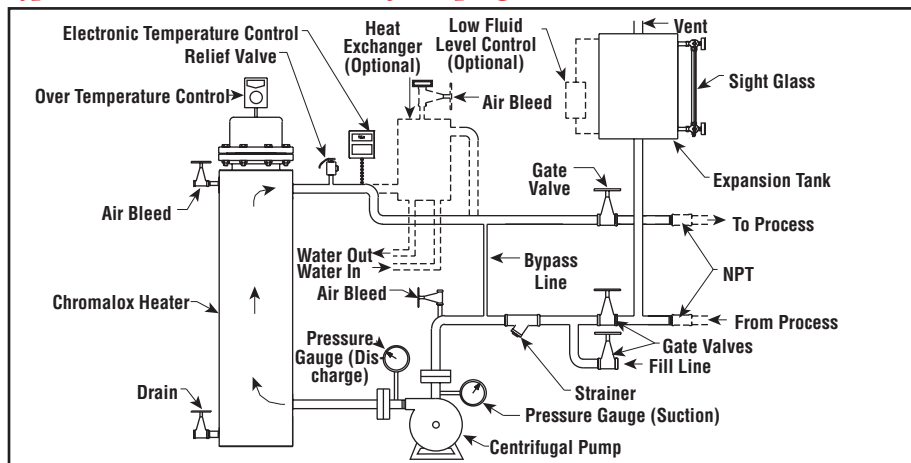


Water Systems Technical & Application Data

- Water and Water/Glycol Solutions to 250°F
- 4.5 - 400 kW (15 - 2,047 Mbh)
- 208 - 575V, Three Phase
- Non-Pressurized or Atmospheric 125 Lb (CMX) and 150 Lb (CWG) Welded Steel Construction
- Heavy Duty 0.430 Dia. INCOLOY® or 0.475 Copper Elements
- Cast Iron Bronze Fitted Centrifugal Pumps
- Electronic Digital Temperature and Process Controls
- NEMA 1 Electrical Enclosure (STD) - NEMA 4 and 12 Explosion Resistant (Class I, Group D, Div. I) Available on CWG Systems
- Integral Power Panels with Mechanical (CWG) or Mercury (CMX) Contactors
- ASME Pressure Relief Valve
- ASME Section IV or VIII Certification Available on CWG Systems
- Optional Open or Closed-Loop Cooling Modules
- Optional Expansion Tank

Note — Mbh is ASME & ANSI standard for one thousand British Thermal Units per hour.

Typical CWG Water Heat Transfer Piping Schematic



Applications

Chromalox Water Heat Transfer Systems are used in process heating applications requiring closely controlled process temperatures. Systems are furnished complete with heaters, controls, pumps, valves, safety devices and necessary plumbing. They are used with injection molding machines and equipment, jacketed vessels, pipelines, heat tracing and other industrial or commercial processes. Water heat transfer systems can be used for special comfort heating applications.

Advantages

The primary advantage of using water as the heat transfer fluid is its low cost and availability. Water has a high specific heat and is an excellent heat transfer medium. In addition, water usually requires no special handling or disposal procedures.

Heating & Cooling Simplicity

Heating water is relatively simple and straight forward. Cooling can be incorporated into most water heat transfer applications by the simple addition of either open-loop or closed-loop cooling.

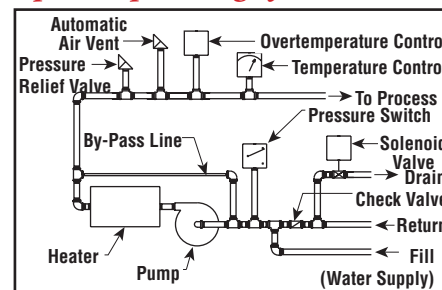
Open-Loop Cooling is the least expensive and the easiest to install. It requires makeup water during the cooling cycle which may be a disadvantage in locations with a limited water supply, or hard water.

Closed-Loop Cooling is usually more expensive initially than open-loop cooling, but has the advantage of reusing and conserving water. A cooling tower or refrigerated system is recommended.

Cooling Options

In open-loop cooling, hot water is circulated normally in the closed loop of the process piping. When the temperature of the fluid rises over the controller setpoint, an automatic solenoid valve opens allowing cool water to be injected into the process loop from the primary water supply. Excess hot water is discharged to the drain.

Open-Loop Cooling System



Closed-loop cooling uses a heat exchanger with water from a cooling tower or refrigerated system. Water is recirculated and conserved. No water is discharged down the drain.

Closed-Loop Cooling System

