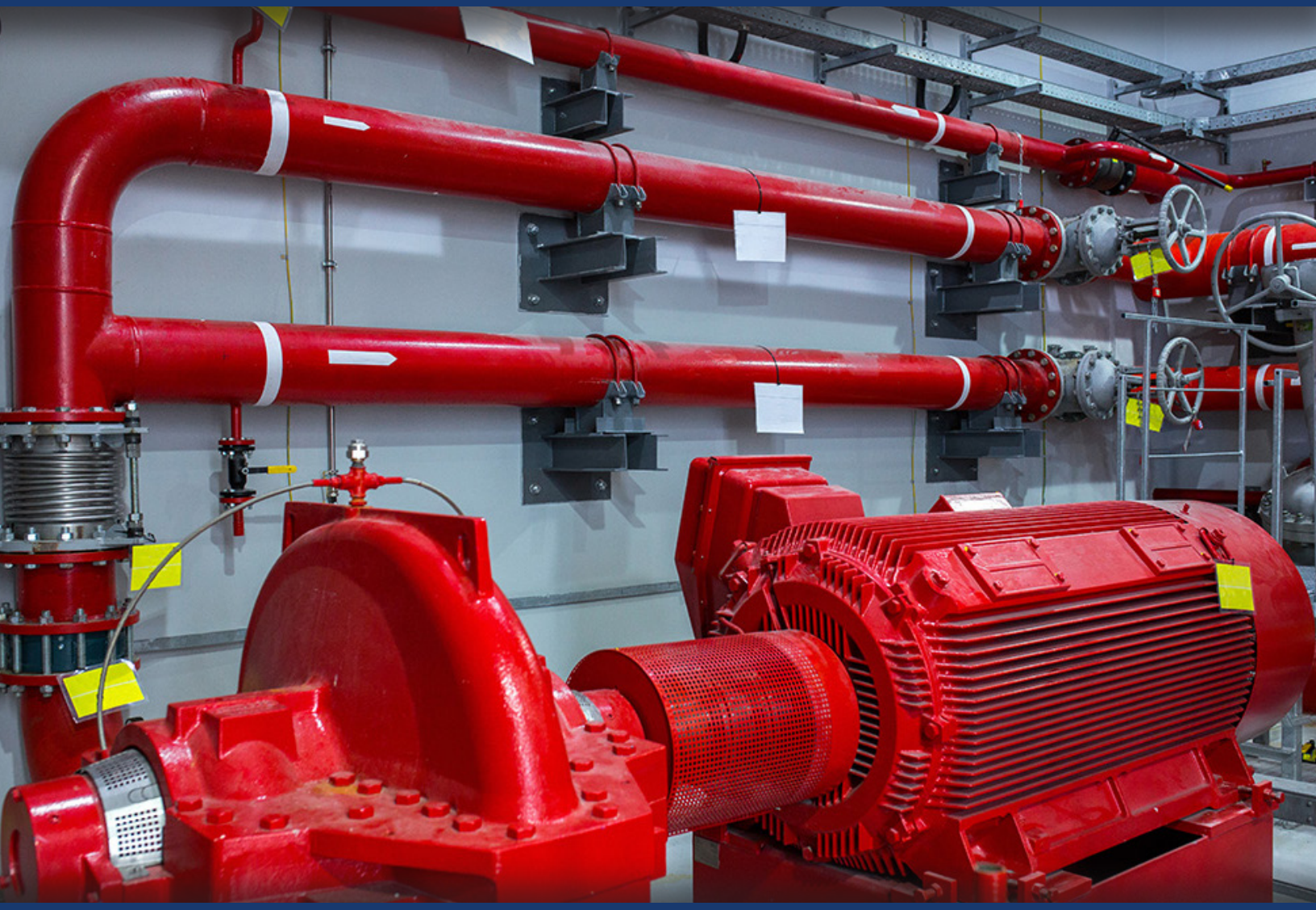
ThermOmegaTech®



Temperature Control Valves
For Pumps and Pump Seals

ThermOmegaTech® offers a variety of self-operating, thermal relief valves to protect a variety of pumps and mechanical seals from over temperature damage and prevent scalding.

ThermOmegaTech's QMS is certified to the AS9100 D Standard

www.ThermOmegaTech.com
877-379-8258

Thermal Relief For Pumps

Thermal relief is needed to regulate the flow of glycol, water, or any other media that flows through high-pressure pumps to remove heat from equipment or a process, essentially protecting the pump and pump seals from over-temperature damage and scalding incidents.

The Need

Pumps are typically used for a variety of applications, from residential homes and commercial buildings to industrial appliances or equipment to provide water pressure. For example, buildings with several floors sometimes struggle with inadequate water flow reaching the higher levels, therefore, a booster pump is installed to supply water at an elevated pressure to distribute flow to those levels. However, if the water demand in the building is less than the maximum demand, the pump will continue to run on an inefficient portion of its performance curve and this excess pump energy goes into heating the water inside the pump.

When high temperature water inside the pump is released through faucets, showers, or any other water supply, users can be at risk of scalding. For this reason, temperature in pumps need to be monitored and controlled constantly to avoid high-temperature damage.

The Solution

ThermOmegaTech® offers 100% mechanically operated thermal relief valves for booster pumps, fire pumps, and other high-pressure pumps to keep them cool during idling.

Thermal relief valves continuously monitor and control water temperature flowing through pumps, while discharging over-temperature water that can be collected, re-used, or re-purposed to eliminate waste.

All of ThermOmegaTech®'s valves are completely mechanical and require no electricity to operate. Our valves rely on automatic temperature monitoring to solve temperature problems ultimately saving time, water, and energy.

Pump Thermal Relief Valves

ThermOmegaTech®'s thermally-actuated *ECONO/HAT-RA* and *HAT/RA-HP* thermal relief valves protect booster pumps, fire pumps and any high-pressure water pumps and pump seals used in industrial and residential applications, from over-temperature damage, while reducing water waste and increasing overall system efficiency.

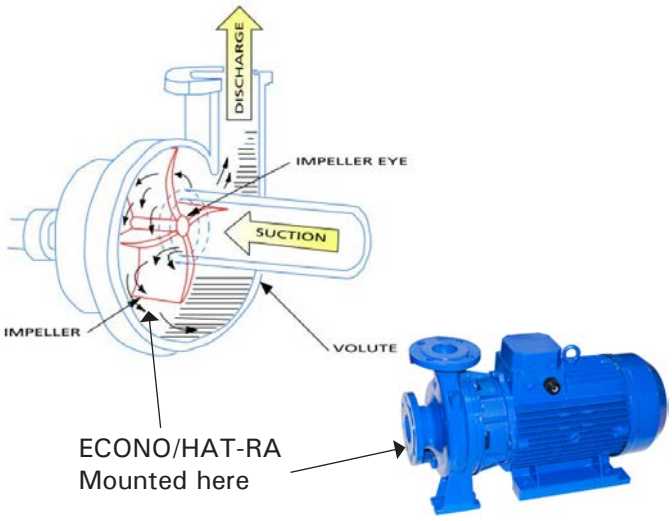
For product dimensions and specifications, visit www.ThermOmegaTech.com

ThermOmegaTech®

PUMP THERMAL RELIEF VALVES

ECONO/HAT-RA

Provides thermal relief for domestic water supply booster pumps to keep them cool during idling. If the water in the pump starts elevating to temperatures higher than the valves set-point it will automatically modulate open discharging the hot water. Once the temperature cools below the set-point, the valve will modulate closed again. This water discharge can be collected, reused, or repurposed to reduce waste.



Benefits

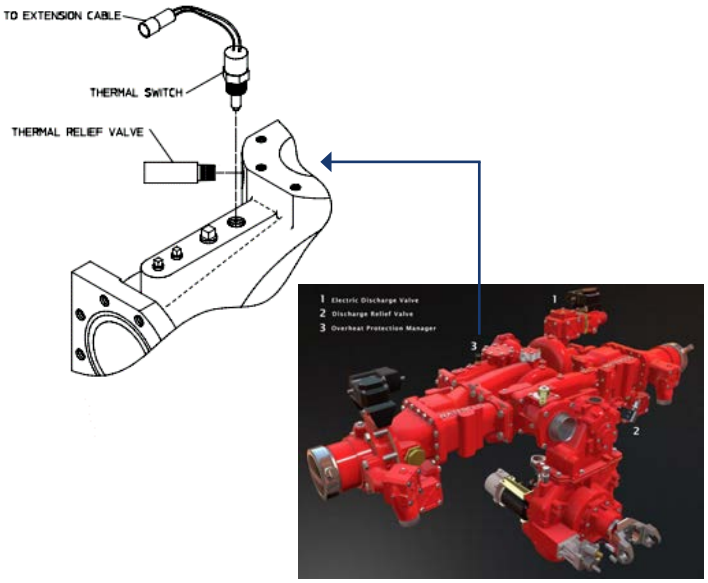
- Protects pumps and pump seals from over-temperature damage
- Prevents scalding water from being distributed to users
- 100% mechanical thermal relief for booster pumps and cooling jackets
- Self-operating - no power or signal required
- Unaffected by pressure variations

Application

While the ECONO/HAT-RA is primarily used to keep booster pumps cool while idling, it can also be used to control cooling water outlet temperature and flow.

HAT/RA-HP

For higher rated pressure systems, the HAT/RA-HP thermal relief valve is used to continuously sense fluid temperature and modulate open to discharge fluid when it is above the valve's set-point. Once outlet temperature cools below the set-point, the valve modulates toward its closed position to reduce flow.



Benefits

- Rated for higher pressure systems - up to 1000 PSIG
- Protects pump and pump seals from over-temperature damage
- Monitors maximum discharge temperature
- Self-operating, no power or signal required
- Improves system efficiency
- Unaffected by pressure variations
- Discharges minimum amount of water to keep water temperature at safe limits

Application

The HAT/RA-HP is used to regulate flow on fire pumps and other high-pressure water pumps.

For product dimensions and specifications, visit www.ThermOmegaTech.com

Mechanical Seal Water Support

Mechanical seal support systems are typically needed for industrial pumps and other equipment with double mechanical seals that pump or mix hazardous substances. The double seal ensures maximum sealing safety by eliminating fluid or gas leakage handled in pumps. Double mechanical seals are typically recommended to prevent pollution, avoid process fluid leakage, control fluid type, provide alternatives for lubrication should fluid failure occur, establish a backup seal in case of seal failure or equipment repair, and to avoid contamination in case of seal failure.

Double mechanical seals that use water for cooling, lubrication, and cleaning without regularly monitoring the water, waste hundreds of thousands of gallons of water a year. For this reason, integrating a mechanical seal support system is crucial for plant savings.

EcoFlow® Mechanical Seal Water Support Valve

ThermOmegaTech®'s EcoFlow® valve is specifically used on pumps with double mechanical seals to monitor and control the seal flush water. This valve provides an optimum seal environment for double mechanical seals, while drastically reducing water consumption and significantly increasing cost savings.

Easily installed on the seal water outlet, the EcoFlow® continuously monitors and controls seal water temperature. It will modulate open if water exceeds the valve's specified set-point, discharging the hot water and replacing it with cool water. This cooler water will cause the EcoFlow® to modulate closed and repeat the cycle as long as excessive heat is being transferred to the seal water. Compared to traditional, manual control of seal water, EcoFlow® can typically save over 90% of water consumption.

Benefits

- Decreases seal water consumption
- Increases water treatment efficiency
- 100% mechanically operated - require no outside source of electricity
- Eliminates dry runs due to operator error & increases seal life
- Decreases operating cost
- Temperature response is unaffected by pressure variations
- Optional side port feature allows flushing debris from inside

For product dimensions and specifications, visit www.ThermOmegaTech.com