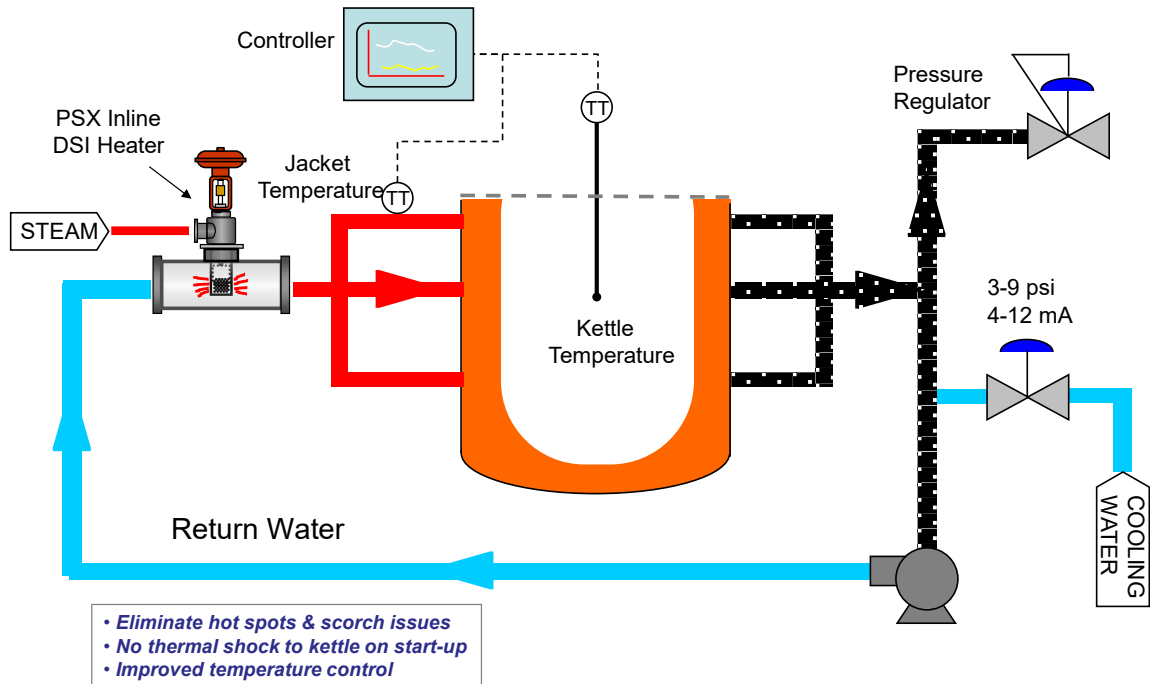


Application: Jacketed Kettle Heating

Jacketed Kettle Heating



Heating of Jacketed Kettles in the food industry is a common method of heating scorch sensitive products such as soups, sauces, & beverages. Typically, steam is introduced to the kettle and circulated through the jacket to deliver the heat for processing. Some Jacketed Kettles are heated in controlled ramp up scenarios to stage the heating time and may also be switched to a cool down stage brings the kettle ingredients back down to safe handling temperatures. Live steam's temperature uniformity in vessel's jacket can produce hot spots. Also, the thermal shock that occurs by the introduction of live steam can crack and damage welds on steel tanks.

PSX Heater Solution:

A PSX heater can be placed on the heat/cool recirculation loop to instantaneously heat the water to the required temperature. Water flowrates from 1 - 2,000 gpm can be efficiently handled with the PSX heater. The PSX can also heat the incoming water from 1 – 250°F in a single pass with temp control to +/- 1°F. As water is heated instantaneously, ramping up temperatures to control reaction timing becomes much more linear and controllable. When cooling cycle is initiated, the PSX steam injector can be closed to allow for cooling fluid to be re-circulated through the system.

ProSonix Direct Steam Injection Key Benefits:

- **Precise temperature control** can improve heating control and ramp up
- **Reduced maintenance** by elimination of thermal shock by using hot water rather than live steam
- Better temperature control allows for **more uniform heating** thus reducing hot spots
- Well suited for cascade heating control systems
- PSX is controlled by the plant PLC/DCS or local controller with no proprietary software required
- Compact heater size allows for minimal installation requirements

For more information, please visit pro-sonix.com.