

This product is represented in Australia, New Zealand, and PNG by:

## InKorr Pty Ltd

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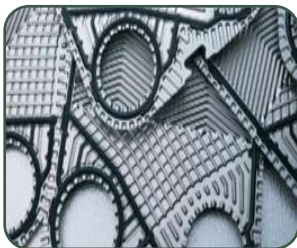
### Heat Transfer Equipment

- Shell & Tube Heat Exchangers - Standard, Custom, Corrugated Tubes.
- Plate Heat Exchangers - Brazed, Gasketed, Semi-Welded, & Welded.
- Graphite Heat Exchangers.
- Plate & Shell Heat Exchangers.
- Spiral Heat Exchangers.
- Crossflow Welded Heat Exchangers.
- Direct Steam Injection Heaters.
- Air Coolers.



### Corrosion Resistant Equipment - Valves, Piping, Vessels & Systems

- Polymer-Lined Valves, Piping, and Pressure Vessels.
- Exotic Metal (Ta, Zr, Ti) Fabricated Piping and Pressure Vessels.
- Glass-Lined Vessels.
- Graphite Equipment and System Packages.



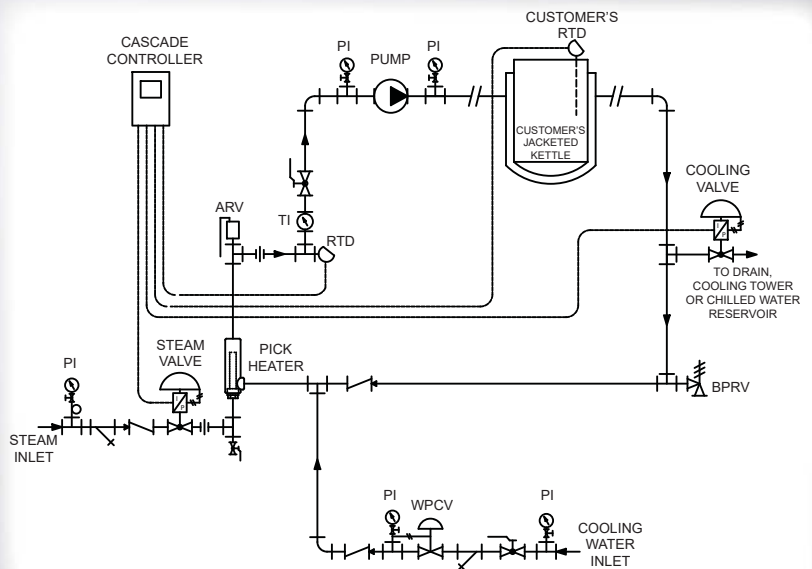
### Service Maintenance

- Plate Heat Exchangers - Refurbishment, Gas Testing, UV Crack Testing.
- Graphite Equipment - Installation, Refurbishment, Repairs.
- Glass-Lined Vessels - Spark Testing, Lining Repair.
- Quality Spare Parts, both OEM and Aftermarket.



Process Heating Solutions Worldwide

## Chemical & Pharmaceutical Processing Industry Case History



## Heat/Cool System for Jacketed Reactor Vessel

### Application

A company producing photographic chemicals for the printing industry wanted better temperature control for heating and cooling a gelatin-based emulsion in 480 gallon jacketed vessels. A hot water system was considered to replace their steam jacket method. The steam jacket method exposed sensitive chemicals to hot spots and made transition to cooling difficult. Batches were very expensive, making product quality of utmost importance.

### Process Conditions

Temperature Rise per Pass:	3-23°F
Jacket Temperature:	180°F
Product Temperature in 1.1 hour:	120°F
Steam Supply Pressure:	18 PSIG

### Solution

The **Pick 6X7-3HCS Pre-Packaged Heat/Cool System** included the basic Constant Flow Heater along with a cooling valve for "metered out" control during cooling mode. Steam and cooling valves are controlled with separate I/P transducers taking signal from customer supplied cascade temperature controller. Complete scope of supply including water circulation pump, check valves, shut off valves, relief valve, piping and fittings assembled on heavy duty angle iron frame.

Learn more at [www.pickheaters.com](http://www.pickheaters.com)

Pick Heaters, Inc. — 730 S. Indiana Ave. — West Bend, WI 53095 USA  
Phone: (262) 338-1191 — Email: [info1@pickheaters.com](mailto:info1@pickheaters.com)

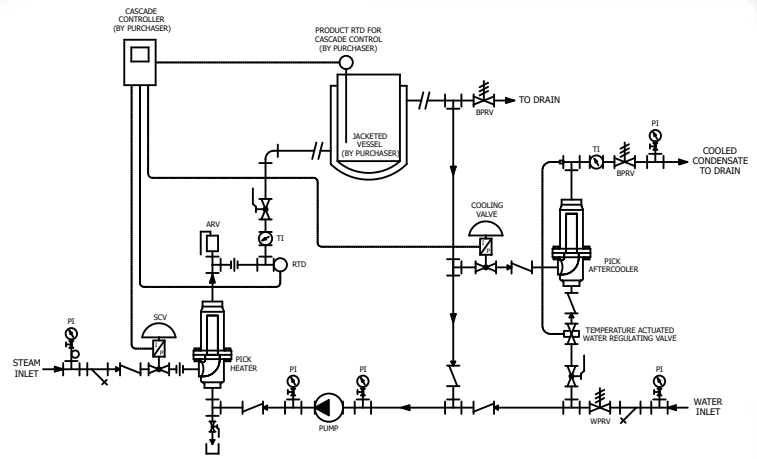
### Features and Benefits:

- Improved Product Quality
- Easy Heat/Cool Transition
- Uniform Jacket Temperatures
- Accurate Temperature Control
- Total System Design Capability and Responsibility



Process Heating Solutions Worldwide

# Chemical & Pharmaceutical Processing Industry Case History



## Pre-Packaged Heating System

### Application

Heat & cool 4,000 gallon Pfaudler® glass lined jacketed vessel. Lubricant type product is heated to 310°F using 316°F water. Exothermic process was maintained at 325°F for 3.5 hours then cooled to 210°F.

### Solution

Pick Model 6X50-3/12HCAC all 316 SS.

The pressurized water loop at 80 psig allows 316°F water temperature, permitting a smooth transition from heating to cooling.

Accurate temperature control prevents damage to glass lining (+/- 1/2° accuracy).

Heat/Cool system was packaged complete with after cooler (Pick mixing chamber) for tempering of discharge cooling water (up to 320°F), blended to 150°F for return to cooling tower.

### Features and Benefits:

- Accurate Temperature Control
- Fully Automatic Operation
- Compact Design
- Smooth Transition from Heat to Cool

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## Pick Replaces Ineffective Competitor's Unit on Four Reactor Vessels

### Application

A producer of PVC resin was experiencing serious steam hammer and vibration using a competitor's heater that featured a "co-axial" mixing design. Four units were installed on large reactor vessels as part of separate heat/cool processes. Each heater produced the same instability. After unsuccessful attempts by the competitor to make corrections, the customer called Pick to evaluate the installation and offer a solution.

### Solution

**Pick Model 6X150-1 Bare Heater** carbon steel construction with 8" flanged water connections. The Pick system provided smooth and thorough mixing of steam, resulting in smooth operation and responsive temperature control. The heater was installed within the existing piping system and was compatible with the steam valve and instrumentation already in use. After proving successful on one reactor, all four competitor units were replaced with the Pick Heater.

### Features and Benefits:

- Smooth, Stable Operation
- Compact Design
- Easy Installation
- Proven Expertise in Process Solutions

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