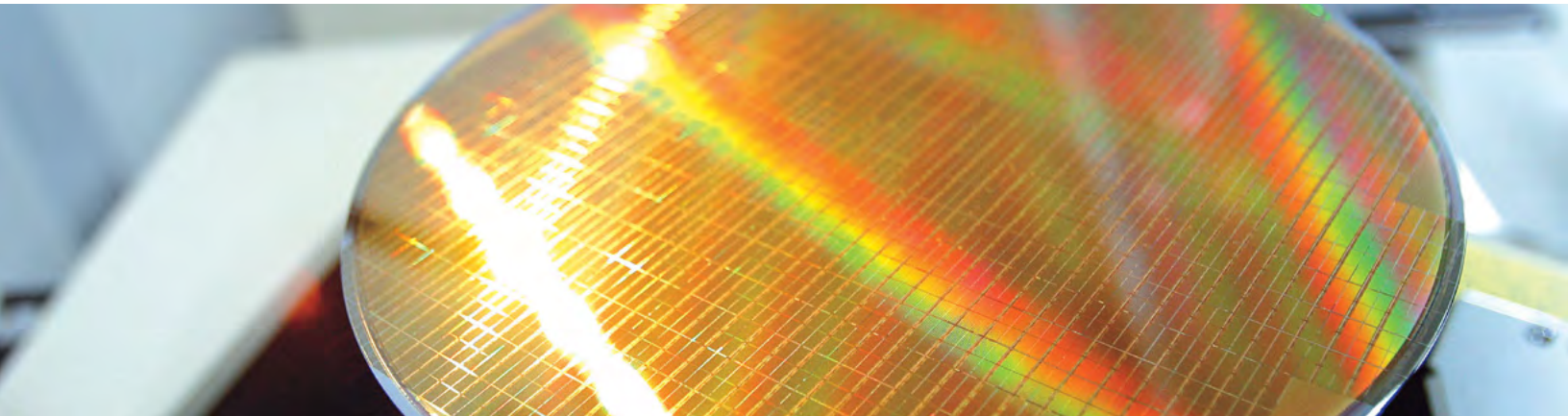


# PROCESS HEAT

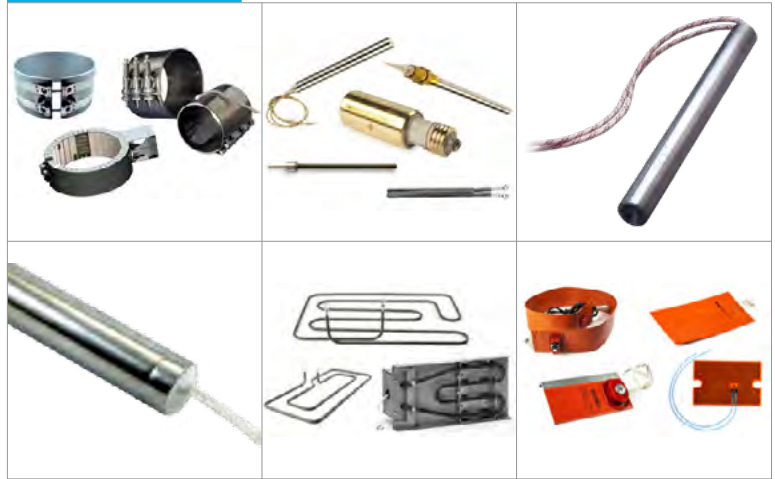


## COMPONENT HEATERS

Cartridge and band heaters are extraordinarily versatile products used to heat a myriad of different processes from heavy industrial applications to plastics and packaging. Single-ended and double-ended tubular heaters lend themselves to virtually the entire range of immersion and air heating applications. Valin also provides flexible heaters that fit your specific needs. Most size, shape or contour can be used to apply direct and efficient heat without sacrificing dependability.

- Ceramic Band Heaters
- MICA Band Heaters
- Mineral Insulated (MI) Band Heaters
- Insertion Cartridge Heaters
- Immersion Cartridge Heaters
- Split Sheath Cartridge Heaters
- High Temperature Cartridge Heaters
- Tubular Heaters
- Flexible Heaters

### Example Products



## BLANKET HEATERS

The versatile designs combine excellent heat transfer and even heating with an insulating outer layer. Heaters can have multiple zones of heating, ensuring that heat is applied only where it's necessary. Units come with a variety of attachment methods and built-in, adjustable controls.

- Drum Heaters and Barrel Heating Solutions
- Tote Heaters/IBC Heaters (for chemical and industrial supplies)
- DEF Storage Heaters
- Bucket Heaters
- Epoxy Resin Curing Blankets
- Gas Cylinder Heaters
- Propane Tank Heaters
- Spray Foam Heaters
- Bulk Material Warmers / Pallet Warmers (Hot Box)
- Specialty Gas Cylinder Heaters
- Heated Pipe Wraps

### Example Products



## AIR HEATERS

Process air applications include heat treating, sterilizing, curing, and forced air. Some heaters have fans, some are radiant style, some are ceramic, while others are rated for hazardous Class 1 Division 1 locations. Whatever your heater needs, Valin has the product for you!

- Eco-Heat® System
- Duct Heaters
- Silicon Rubber Enclosure Heaters
- Strip Heaters
- Single-Ended Heaters
- Watrod™ Enclosure Heaters
- Industrial Unit Heaters
- Industrial Convection Heaters
- Infrared Radiant Heaters
- Radiant Panel Heaters
- Metal Sheathed Radiant Heaters
- Comfort & Radiant Heaters

### Example Products



# COMPLEX TECHNOLOGY MADE SIMPLE

## TANK HEATERS

Valin offers electric tank heating solutions for any application and any style of tank. Large tank heaters are available that are uniquely designed to heat large storage tanks located above or below ground that contain highly viscous fluids or heat sensitive materials. These units allow tank heating elements to be changed without draining the tank. This is ideal for large capacity tanks that must remain filled for continuous operation and storage.

- Screw plug immersion heaters
- Flanged immersion heaters
- Ansi Flange Immersion Heaters
- Over-the-Side immersion heaters
- Heat Transfer Systems
- Suction Heaters
- Indirect Tank Heating

### Example Products



## IN-LINE HEATERS

Inline heaters are designed to heat either a liquid or a gas while the process is moving. The process flows across the heating elements, inside a custom engineered pressure vessel. Examples include fuel gas heaters where wet gas is flowing through a pipe and must be dried before burning. Another common application is seal gas, where high pressure, high temperature gas is flowing into a large piece of rotating equipment. The gas is used to create positive pressure and prevent particulate ingress. A myriad of applications exist on the liquid side as well, from crude oil to vegetable oil. And, as always, we pair our heaters with a control panel to provide the most energy efficient operation. Valin personnel have worked on highly critical applications in the harshest environments. Put our expertise to work to you!

- Heat Exchanger
- Gas In-Line Heaters
- Liquid In-Line Heaters
- Circulation Heaters

### Example Products



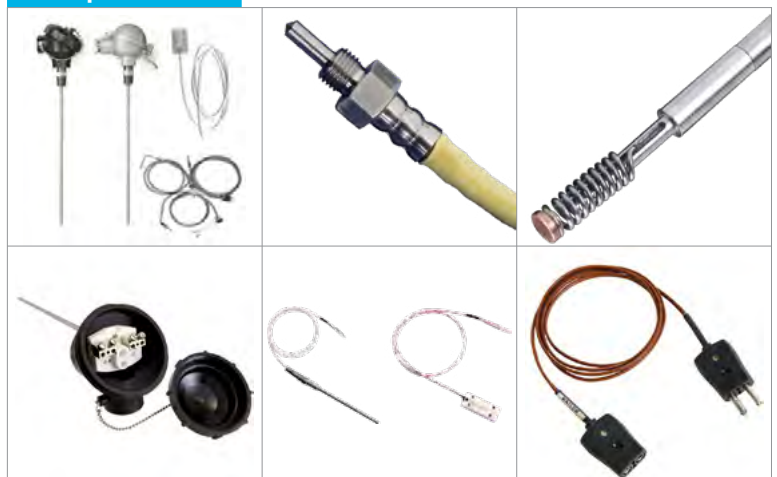
## TEMPERATURE SENSORS

Temperature sensors for industrial and commercial applications assure precise and accurate temperature control of critical processes. Temperature sensors are used to measure temperature in countless industrial processes, laboratory and medical instruments and commercial applications. Valin provides custom manufactured thermocouples and RTD's specifically designed to meet individual customer requirements, and we carry a large inventory of thermocouples for immediate delivery. In addition, we stock a wide range of temperature sensing accessories.

### Themocouples:

- Precision Insulated
- MGO
- Nozzle & Ring Type
- Precision Insulated
- Surface Plate
- High-Temp. Overbraided
- Special Purpose Thermocouple Sensors
- Adjustable Depth Sensors
- Unique Surface Probes
- RTD's of all types and configurations

### Example Products



## ADVANCED CONTROLLERS

No system is complete without a control loop. From power controls to temperature controls, from a thermostat to a complex PLC equipped with multiple I/O and communications, trust Valin to match your heater with the appropriate control panel.

- Integrated Process Controller
- Integrated Solid State Controller
- Panel Mount Controller
- Panel Mount Express Controller
- Closed Loop Integrated Controller

### Example Products



## PANELS

The VTS-100 panel offers a single PID controller with a built-in over-temperature input to protect the heater. Since it contains a dedicated safety contactor, the Valin standard panel offers a true shut off, conserves space and alleviates the need to purchase a separate controller. Our UL 508A panel shop can also quickly and easily build custom panels.

- Three pole control contactor
- Step down transformer with fusing
- Dedicated safety contactor (standard)
- 3 Enclosure choices
- Disconnect switch (standard)
- Optional enclosure heater
- Customer interlock
- Enclosure Types
- Polycarbonate (Type 4X)
- Carbon steel (Type 12)
- 304SS (Type 4X)
- Single or three phase
- 30 or 60 Amp contactor for resistive loads
- 120/240/480 VAC fused control power transformer

### Example Products



## HEAT TRACE

Self-regulating cable can be cut to length in the field and regulate heat output automatically in response to pipe temperature. The ability to easily wrap the cable around valves or flange pairs reduces installation time and lowers overall job cost. Valin's knowledge and product lines optimize the system to maximize run lengths and ensure you have the smallest numbers of circuits possible.

- Self-Regulating, constant wattage, and MI cable
- Full line of accessories
- Isometric Drawings
- Fully engineered Bills of Material
- Take Offs
- Site Supervision and installation
- Start up and Commissioning
- Panel Troubleshooting and Programming

### Example Products



## PROCESS HEAT

At Valin, we know heat. We have worked on the toughest applications in the industry and have over 200 years of process heating experience in our knowledge center. Valin enhances throughput and profitability by expertly sizing your heater and matching it with an appropriate control scheme. We can heat air, liquids, or solids. Skid systems are our specialty, and our in-house engineering team can size a pump, specify the right valves and instrumentation, and create an entire customer-designed skid ideal for your application.

### Packaged Systems

Valin's heat transfer systems include pre-engineered and custom-designed systems for liquid or gas applications. They can be used to heat or cool your process and come complete with pumps, instrumentation, control panels, and, of course, a heater specifically matched to your process.

### Heater / Pump Skids

Certain processes require a maintained temperature. This could be to prevent fall-out or crystallization or separation. In large tanks, local heaters are not sufficient because the density or specific heat of the process lends itself to stratification. In such instances, the heater must be combined with a process pump, thus creating a kidney loop. Heater/pump skids are able to maintain a constant temperature throughout the storage tank, preventing freezing, fallout, or stratification. Integrated filters ensure process purity and the valves are tied into a system PLC with full SCADA communications, providing a fully automated solution.

