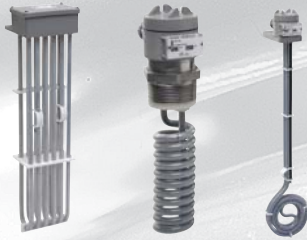


Electric Immersion Heaters



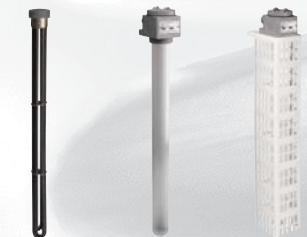
Fluoropolymer (PTFE) Heaters: Compatible with virtually any chemistry. Sizes up to 18 kilowatt. Single or three phase. Large variety of standard and custom configurations for over-the-side and tank bottom installations. Low profile, custom designs available. Rigid and flexible risers available. Screw plug and flange heaters in sizes from ½-inch screw plug (100 watt) to 6-inch flange (18 kW). Thermal overtemperature protection standard (except screw plug). cULus and CE.



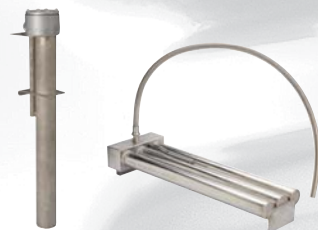
SmartOne® (PTC) Heaters: No thermal protection required because the SmartOne® heater self limits its maximum heat output (below the ignition point of most plastics). Available in titanium, 316 and 304 stainless steel. Up to 18 kilowatt. Single or three phase. Three flexible voltage ranges available (up to 480 volt). Operates in air, sludge, or scale. Longer lasting and safer than resistive heaters. cULus and CE.



Metal Heaters: Variety of materials to match your application (titanium, 316 and 304 stainless steel, and plain steel). Sizes up to 54 kW. Standard and custom configurations for over-the-side and bottom installations in open tanks. Screw plug and flange heaters in titanium and 316 stainless, sizes from ½-inch screw plug (100 watt) to 6-inch flange (72 kW). Thermal overtemperature protection standard (except screw plug). cULus and CE.



Quartz Heaters: Ideal for most acidic chemistries. Metal grounded elements with quartz sheath. Up to 10 kW single tube or 30 kW triple tube. Polypropylene guards standard. Fluoropolymer guards available. Tube assembly, metal element and guard sold separately, but all three must be used together. Thermal overtemperature protection standard. cULus and CE.



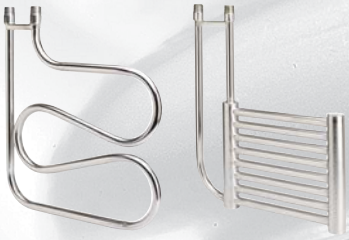
Special Application Heaters: We specialize in unique and difficult applications. Configurations available include: phosphate heaters, lab heaters, flexible riser heaters, deep tank heaters, Varipower™ heaters, **EAsyPLUG™** heaters (heater plugs into the control, the control plugs into the wall). MANY custom heater configurations not cataloged are available. Call the factory for application assistance.

Inline Water Heaters



Water Heaters: Point of use electric water heaters for industrial applications. Excellent for DI spray rinse, precision cleaning, reverse osmosis water, city water, and salt water. Integrated heater and control system. Wall mounted up to 72 kW, floor mounted up to 144 kW. Single pass or recirculation. All titanium or stainless steel wetted parts. Custom controls available. cULus.

Coils and Heat Exchangers



Metal Heat Exchangers: Designed and built to your specific application needs. Grid coils (single and multi-bank), serpentine coils, helical coils and “U” coils. Standard and custom designs. Steam or water service for heating or cooling. Immersion liquid-to-liquid heating/cooling. Wide variety of materials available including: titanium, 316 stainless steel, and zirconium.



Fluoropolymer Heat Exchangers: Rugged construction for difficult applications. Integral perforated fluoropolymer guards. Excellent chemical compatibility. 30 PSI steam, 60 PSI steam, or water service. Integral inlet/outlet manifolds for single point plumbing connections. Immersion liquid-to-liquid heating/cooling. Up to 46 square feet (4.3 square meters) exchange area available.



Inline Heat Exchangers: Sized to your application. 316L stainless steel spiral plate (up to 15 square feet/1.4 square meters) design. Custom manufactured shell and tube fluoropolymer heat exchangers also available, contact factory for assistance.

Temperature Controls & Liquid Level Controls



Temperature Controls: Wide range of styles available for your wet process application. Digital controls in 1/4, 1/8 and 1/16 DIN sizes, and non-indicating controls available. Combination controls for large heater installations up to 150 amp capacity. Custom designed central control stations. Fluoropolymer-covered temperature sensors included standard. Plastic enclosures for chemical resistance.



Liquid level controls: Conductivity and capacitive style level controls for the ultimate in reliability. Multi-level controls available (up to five levels in one probe assembly). Can be packaged and matched with our temperature controls. Several materials available for chemical compatibility. Most level controls are field adjustable.

Accessories



Accessory Items: We offer a wide variety of accessories including: thermowells to stabilize temperature sensors in the tanks, digital timers to start heat up cycles, amp hour meters to measure rectifier output, solenoid valves to turn on/off heat exchangers, strainers to remove contaminants from steam lines, coil insulators to protect metal heat exchangers from stray electrical current, vacuum breakers for protecting fluoropolymer heat exchangers in steam lines from collapse, and rigid temperature sensors.

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