

## Circulation Heaters

### Overview

- In-Line or Recirculating
- Water, Solutions, Oils, Steam and Gas Heating
- High Efficiency
- Packaged Heater, Vessel and Control
- UL, CSA, ATEX or Other Electrical Certifications Available
- ASME, PED or Other Pressure Certifications Available
- Custom Designs



CIRCULATION HEATERS

Circulation heaters are packaged units designed to heat a flowing medium using in-line or side-arm piping configurations. Complete units consist of built-in heating elements, a heating chamber, thermostat and/or sensors (stock units), insulation, insulation jacket, mounting brackets and inlet and outlet connections.

Circulation heaters offer high efficiency since all heat is generated within the solution. Fluids are directed past the heating elements giving fast response and even heat distribution.

A wide selection of kilowatt ratings, materials, vessel sizes, terminal enclosures, control features and mounting methods are available for all types of heating requirements.

SCR and Contactor Control Panels available for integral or remote mounting. Consult Controls section for details.

### Applications

Typical applications include heating water, oils, heat transfer fluids, mild and corrosive fluids, gases and steam. Heaters can be mounted on the side of tanks, inserted into closed-loop systems or installed in-line for process heating.

**Water Heating** — Washrooms, dish washing and rinsing, process water heating, jacketed kettles, hot water storage tanks and hydronic heating systems.

**Freeze Protection** — Water cooled engines, stand pipe water tanks for fire protection, oil sump heaters.

**Heat Transfer Oil Heating** — Process kettles, molding dies and platens, mixing and blending mills, closed-loop heat transfer systems for asphalt and heat sensitive materials.

**Fuel Oil Heating** — Preheating to pumping viscosity, preheating for delivery to burners.

**Steam, Air and Gas Heating** — Steam superheating, air preheating for process equipment.

### Special Features

Consult your Local Chromalox Sales office for more detailed information on many special features, larger kilowatt heaters and skid mounted circulation heater systems.

### Application Engineering

The Chromalox sales and service organization has the technical capabilities and equipment to satisfy virtually any circulation heating application and to assist you in calculating requirements for the more common heating processes.

The Chromalox organization is the most experienced and diversified manufacturer in the electric heating business. Whatever your heating requirements, you can depend on the technical know-how of your Chromalox field representatives. Backed by the highly skilled engineers and modern manufacturing facilities, Chromalox field sales engineers can help determine your requirements and provide you with high quality equipment, properly selected, sized and applied.

### Section Outline

Section	Page
Features	C-4
Terminal Enclosures	C-5
Control Options	C-8
Clean Water Series	C-10
Oil Series	C-17
Steam, Air & Gas Series	C-24
Corrosive Solution, Water & Hi-Temperature Gas Series	C-28
Pre-engineered Packaged Units	C-34
Custom Engineering	C-36