

# POLLUTION CONTROL

Chromalox®

**Chromalox®**  
PRECISION HEAT AND CONTROL

**Precision Electric Heat and Control Systems  
for Power Generation Pollution Control Systems**



## WHY CHOOSE ELECTRIC HEAT?

- Consistent pricing
- Clean-running operation
- No pollution
- Quiet operation
- Reduced footprint and envelope size
- Minimal maintenance
- Low operating cost
- Safety
- Large turndown / precise control

### Service and Maintenance

Start-up, commissioning, and yearly service visits ensure optimal operating conditions and help to predict needed maintenance.

### Urea Tank Heaters

LTFX-style immersion heaters maintain urea concentrations above their freeze temperatures.

### Aqueous Ammonia Vaporizer

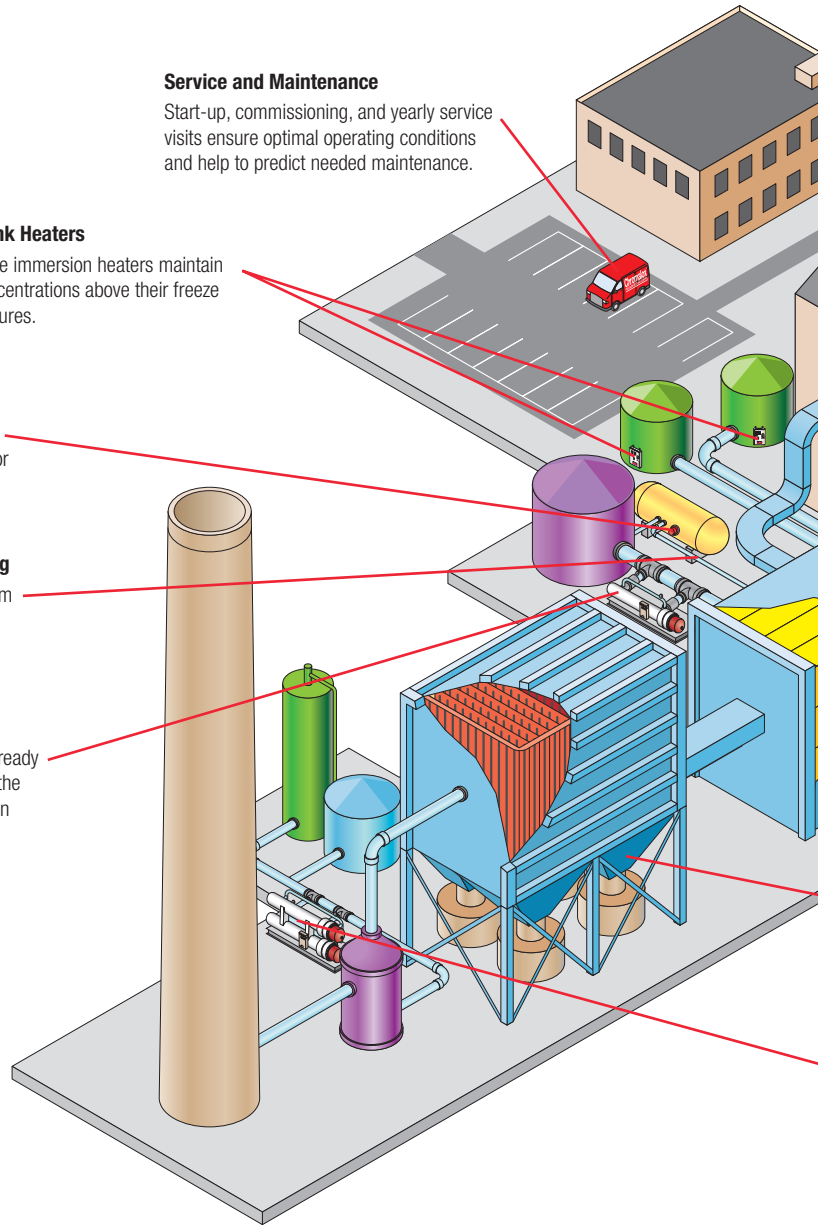
Immersion heaters with SCR power control used to vaporize ammonia for NOx reduction.

### Anhydrous Ammonia/Urea Piping

Heat trace counteracts heat loss from process equipment and piping and provides freeze protection.

### Ammonia Storage Tanks

In-line circulation heaters stand by, ready to warm ammonia for injection into the pollution control stream and maintain system pressure.



### Large-Tank Heating Systems

Chromalox large-tank heaters employ metal-sheathed tubular or ceramic-insulated, open-coil pipe insert heating components for use in Schedule 40 nominal pipe sizes. This unique construction allows heating elements to be changed or field-serviced without draining the tank. Complete with Chromalox controls, these large-tank heating systems can be operated to maintain materials at the proper temperatures with little or no manual attention.



### Immersion Heaters

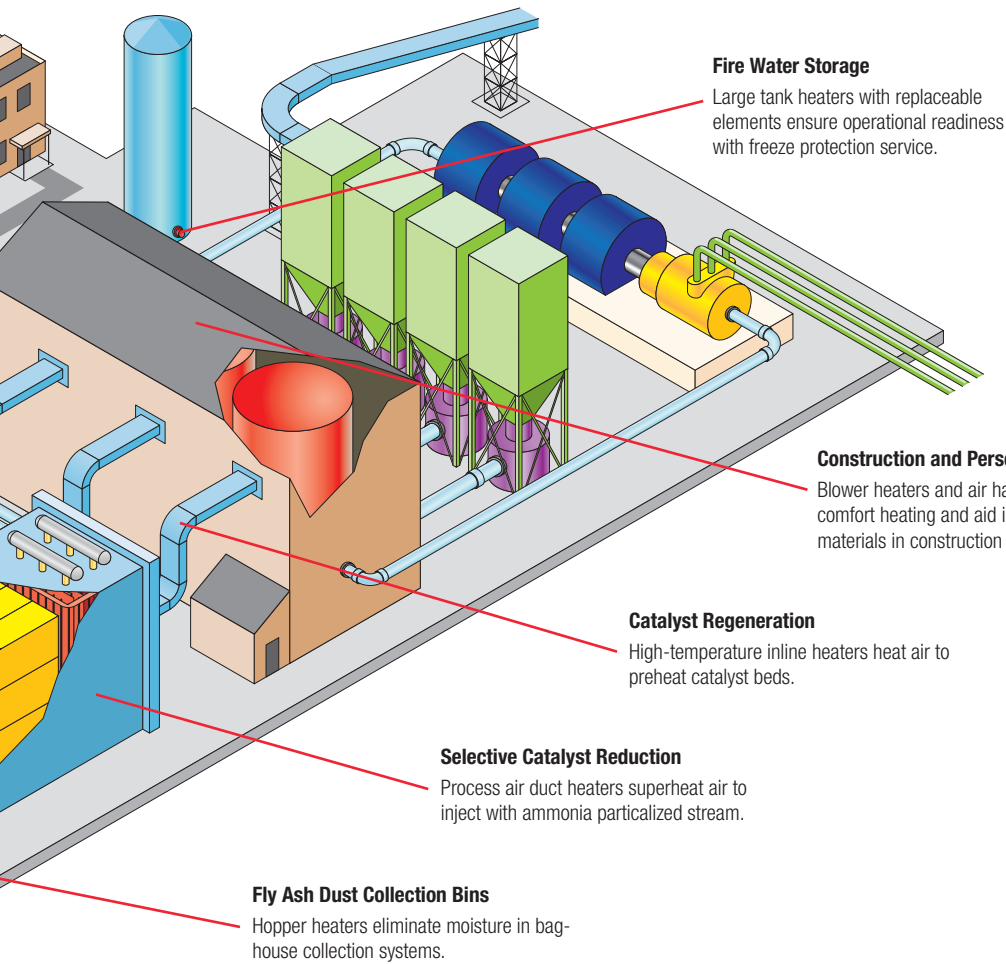
Chromalox immersion heaters apply heat directly at virtually 100 percent efficiency. Basic piping options include threaded, flanged, or welded. Various temperature control options permit very tight process temperature control. Our circulation heaters are designed to heat a flowing medium using in-line or side-arm piping configurations. A wide selection of kilowatt ratings, materials, vessel sizes, terminal enclosures, control features, and mounting methods is available.



### Comfort Heaters

Chromalox electric comfort heaters provide efficient, economical heat for warehouse, shipping/receiving, distribution, and manufacturing areas. Convection, forced-air, and radiant heaters provide safe, clean, fast heat. Heavy-duty construction affords long, dependable service.





**Fire Water Storage**

Large tank heaters with replaceable elements ensure operational readiness with freeze protection service.

**Construction and Personnel Heating**

Blower heaters and air handlers provide comfort heating and aid in curing materials in construction areas.

**Catalyst Regeneration**

High-temperature inline heaters heat air to preheat catalyst beds.

**Selective Catalyst Reduction**

Process air duct heaters superheat air to inject with ammonia partialized stream.

**Fly Ash Dust Collection Bins**

Hopper heaters eliminate moisture in bag-house collection systems.

**Limestone Slaker Water**

Large inline electric preheaters heat and maintain make-up water for slurry mix.

**Duct Heaters**

Compact, safe, and lightweight heat sources, Chromalox process air duct heaters are available in sizes ranging up to 3.2 MW capable of producing temperatures up to 1,200°F (650°C) for heating air or other gases. Sheathed tubular, finned tubular, and finned strip elements consistently outperform gas, oil, and open-coil electric units in both heating efficiency and safety. Elements and special materials are available for use in custom designs.



**Heat Trace and Controls**

Heat trace is used to counteract the heat loss from process equipment and piping through its insulation, to prevent solution precipitation and the increase of viscosity or solidification of product, and to provide freeze protection. Chromalox offers a variety of heat trace cable; temperature control, monitoring, and management in one, modular package; and all of the necessary components needed to complete the installation, including splices, power connection boxes, and water-resistant end-seal terminations.



**Control Systems**

From basic, low-cost temperature and process controllers, to monitors and overtemperature controls, to more sophisticated control systems like the Chromalox® intelliPANEL™ 3-phase SCR power control panel featuring unique color touch-screen technology, Chromalox can design the right system for your plant's needs. We are the only heating element supplier offering a complete line of controls, control panels, and accessories.



**WHY CHOOSE CHROMALOX?**

- Broadest product line and experience unmatched in the industry
- Precision-engineered heat and control systems for more alternative fuels processes throughout the world than anyone
- Vertical integration in manufacturing capabilities
- Full design and engineering for virtually any electric process heat and control application

POLLUTION CONTROL

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# Chromalox Value-Added Products and Services Are Available Worldwide



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