

Chromalox[®]
PRECISION HEAT AND CONTROL

**Precision Electric Heat and Control Systems
for the Power Generation Industry**



POWER GENERATION

PRODUCTION

BROADEST PRODUCT LINE, UNSURPASSED EXPERIENCE

ASSURING YOUR PROCESS PERFORMANCE WITH CHROMALOX



The Chromalox Difference

Some companies build heaters and controls. Chromalox does more.

Chromalox brings a dual focus to the marketplace. We focus on precision . . . precision in the design and manufacture of our products and precision in their performance in order to provide the finest products for your application. And we focus on your specific application with the insight to help maximize its performance and efficiency, and the technical support to help you achieve it.

Chromalox Understands Every Facet of the Process

We provide precision heat and control systems for more processes than anyone in the world. Our expertise, combined with the most stringent material and manufacturing standards you'll find in the industry, provides you with an array of products you can count on to perform at each critical process phase. Among them are process air heaters for inlet housings, circulation heaters for superheating, flanged immersion heaters for sulfur reduction, self-regulating cables and controls for freeze protection, and explosion-resistant comfort heaters that keep process equipment warm for quick starts on peaker plants and free from moisture and freeze-ups.



Chromalox Meets Your Specific Challenges

With that kind of experience behind us, Chromalox understands the unique challenges that power plant builders, managers, and maintenance personnel face. And we have the knowledge, experience base, local support, and technical skills to meet those challenges with you.

TECHNOLOGIES THAT REFLECT AN UNDERSTANDING OF POWER GENERATION

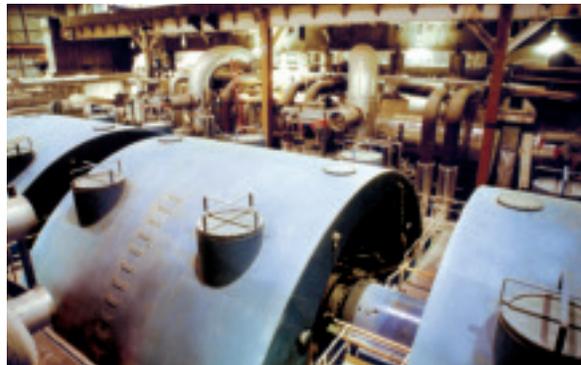


Chromalox Can Save You Time and Money

Our standardized designs can reduce your installed cost as well as your eventual replacement cost. Our electric process heaters require minimal cleaning and calibration. Using Chromalox third-party-certified electric package systems results in reduced insurance premiums for you—lower than those offered to competitors using fuel-fired systems.

Chromalox Can Improve Your Process Efficiency

Chromalox control panels, coupled with the precision and reliability of Chromalox heaters, optimize temperature control and shrink variations in efficiencies, allowing a better burn. Chromalox power controls, SCRs, and proprietary software precisely sequence heaters, balance electrical loads, control soft starts, and correct power factors, flattening out electrical fluctuations.



CHROMALOX HAS A LONG HISTORY OF INNOVATION IN THE POWER GENERATION INDUSTRY

Chromalox has been developing better means of applying electrical heat for the power generation industry since 1915. That year, we introduced the world's first metal-sheathed heating element.

DESIGN ENGINEERING

BENCHMARKS OF THE INDUSTRY'S DESIGN AND ENGINEERING LEADER

- Chromalox introduced the world's first metal-sheathed heating element over 90 years ago
- Chromalox engineers 3,600 unique, new products every year
- Chromalox has more than 700,000 customer designs on file
- Chromalox in-house lab certifies products for both CSA and UL requirements

UNRIVALED DESIGN, ENGINEERING, AND MANUFACTURING CAPABILITIES FOCUSED ON YOUR COMPLETE HEAT AND CONTROL APPLICATION

Front-End Engineering Design Assistance

Chromalox has more experience in process design than anyone else in the industry. Prior to construction, let us put that experience to work for you.

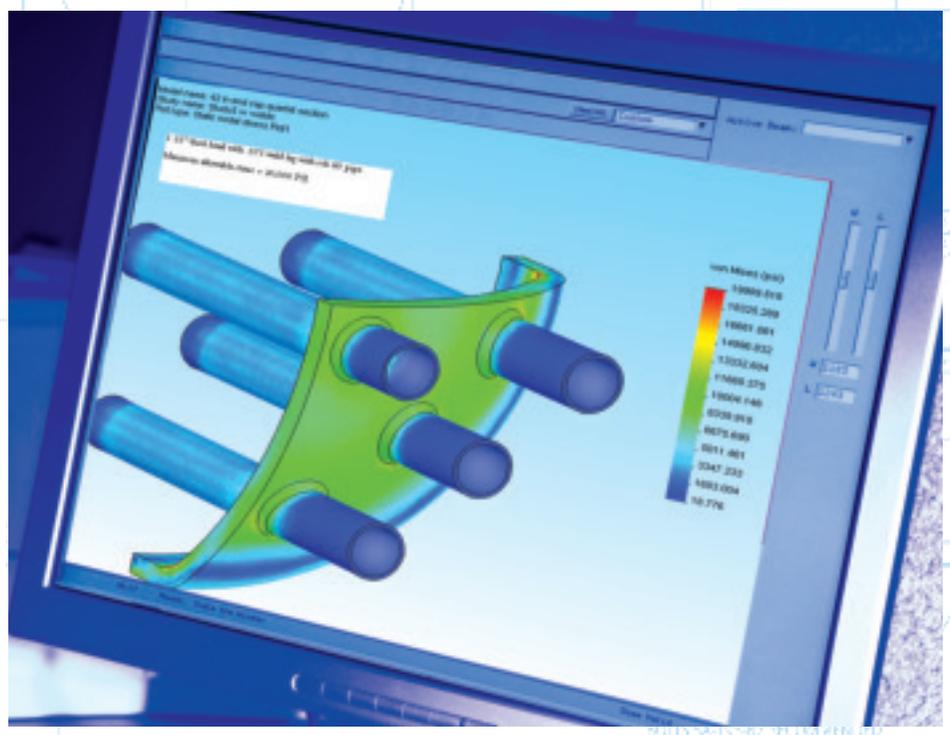
Accurate planning and sound engineering are keys to any process. Our engineering support staff can help to properly specify equipment that will get the job done right the first time so when you enter the construction phase, you can be sure that the specified equipment will operate as desired.



Comprehensive Engineering Capabilities

From heater assemblies and skid fabrication to integration with controls and sensors, our complete engineered systems reduce installation labor, reduce startup time, and ensure proper operation to specification. Chromalox provides engineering assistance with integrating our products into your application, offering a full range of engineering capabilities.

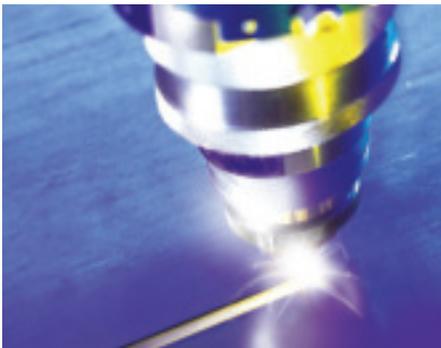
Our in-house engineering and software capabilities allow us to design simple operator interfaces. These advanced designs can reduce your business' training time and expense, as well as increase repeatable operation. In addition, Chromalox has training tools and resources to assist you with installation, startup, and operation.





Custom Design and Manufacturing for Unique Requirements

If an element, sensor, control, or packaged system that we carry in stock doesn't exactly fit your needs, we'll custom-build it—either by expertly adapting an existing product or by designing and manufacturing a completely new one. Our design engineers have won industry awards for innovation and rapid turnaround of custom designs. They bring expert knowledge in process engineering design together with a flair for innovation to help you produce prototypes of new products and systems, developing an innovative design in the shortest possible turnaround time.



Manufacturing That Leads the Industry

Chromalox maintains four state-of-the-art manufacturing plants throughout the United States, Mexico, Europe, and Asia. In the U.S., Chromalox has more than 325,000 square feet of manufacturing and warehousing space in Utah and Tennessee. Our manufacturing capability features computer-controlled, automated machinery to help quality. With ASME welding capability in-house since 1953, Chromalox has gained more in-plant experience than any other electric heater manufacturer for high-quality welding. Our large-volume ASME production of high-pressure systems gives Chromalox the experience base to perform ASME welding at a level of excellence unsurpassed in our industry.

Broadest Third-Party Approval

Chromalox is the only manufacturer with extensive systems manufacturing in the U.S. and Europe. Approvals and certifications include, but are not limited to, CE, NEC, UL, VDE, cJUL, FM, CSA, MSHA, BASEEFA, Cenelec, ASME, PED, ATEX, GOST, and ISO 9001:2008.



BENCHMARKS OF THE INDUSTRY'S MANUFACTURING LEADER

- Chromalox produces 3,383 miles of tubular elements in North America alone . . . nearly the diameter of the moon
- Chromalox makes enough heating cable each year to stretch from Northern Italy to the tip of Sicily
- Chromalox employs more than 1,000 production personnel at 4 manufacturing plants on 2 continents
- Chromalox produces more than 3 million stand-alone items each year

MANUFACTURING

VALUE ADDED

SERVICE AND SUPPORT TO MINIMIZE YOUR DOWNTIME

As the world's most comprehensive manufacturer of electric heat and control products and systems, nobody knows heaters, controls, and applications like Chromalox. We know your Chromalox heat and control systems from the component parts on up. We understand their functionality. And we can protect and maximize your investment with proper maintenance and assessment strategies.

CHROMALOX SERVICE OPTIONS ENSURE OPTIMUM PERFORMANCE AND EXTEND PRODUCT LIFE



From startup and training to ongoing maintenance diagnostics and emergency response, we offer customized service options to ensure the quality and continued success of your process.

Startup and Commissioning

New equipment startups can often delay project timelines. Minimize any chance for costly setbacks by having a Chromalox qualified engineer for on-site startup and commissioning the mechanical, electrical, instrumentation, and control equipment for any system we have built, anywhere in the world. They will assist with initial equipment startup and perform a complete review of the installed system to ensure optimized integration into your facility, increasing overall efficiency. You will save time and know that your product was installed correctly.



Chromalox Cold Weather Contracts

Cold weather can be a strain on much of your system's equipment. To help you avoid unplanned downtimes that can occur due to cold weather Chromalox offers a package of pre-season planning and preventive maintenance services to ensure proper equipment operation before the cold weather strikes. This added degree of security provides confidence that the heat will flow when you need it.

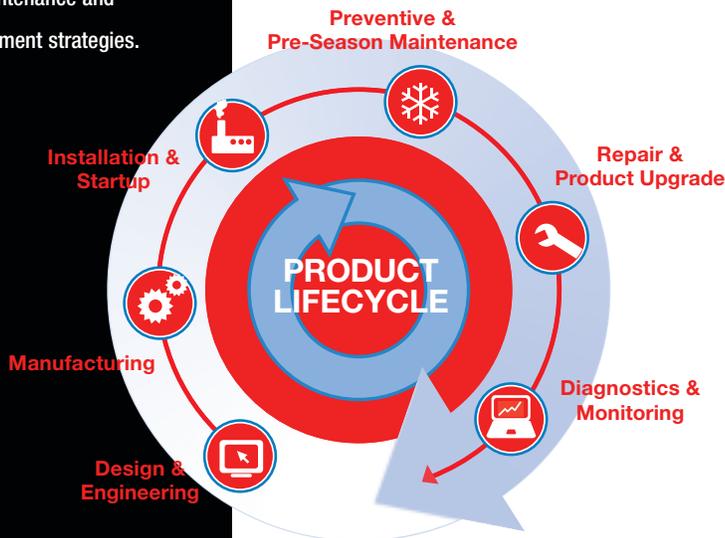


Chromalox Service Contracts

Chromalox Service Contracts deliver efficient emergency response and preventive maintenance, helping to eliminate problems before they arise. Chromalox field service personnel are experts at maximizing the performance of your process heat and control systems with a variety of on-site services including multi-point inspections, guaranteed emergency response times, site reports, and replacement parts availability.

Serving you is our number one priority!

Call 1-800-443-2640



RESOURCES TO HELP GETTING IT DONE, EASIER

Unmatched Stock, Rapid Delivery

Chromalox maintains an inventory of nearly one million items. We also operate the fastest delivery system in the business. We can ship any component or system we stock within 24 hours through our chromalox.com electronic order entry system. Same-day delivery is available for many items. In addition, factory offices, stocking representatives, and over 500 authorized distributors carry Chromalox components and systems for same-day pickup. For assistance, call 800-443-2640.



Technical Assistance on the Internet at www.chromalox.com

Go to www.chromalox.com anytime, day or night, for valuable information in product literature, product specs, training manuals, and technical documentation. You'll find answers to questions about anything from electronic temperature controllers, pumps, and fluids, to material compatibility, corrosion, and wire sizing.



Chromalox Value-Added Products and Services Are Available Worldwide



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