

ASSURING YOUR PROCESS PERFORMANCE WITH CHROMALOX

THE CHROMALOX DIFFERENCE

At Chromalox, we develop advanced thermal technologies for the world's toughest industrial heating applications. We do it better, and we've been doing it longer than anyone else. What separates us from the competition is our desire, ability, and dedication to applying our unique combination of technical competence, experience, and expertise, to understanding our customers' needs and providing them with an individualized custom heating solution. Our customers rarely require off-the-shelf solutions, and our quest to be innovative experts is unrelenting.

BROADEST PRODUCT LINE, UNSURPASSED EXPERIENCE

With the broadest product line in the industry, Chromalox provides advanced thermal technologies engineered for the world's industrial heating applications. We serve industries as diverse as packaging, medical, chemical, analytical, life sciences, the military, and pharmaceutical.

CHROMALOX HAS A LONG HISTORY OF INNOVATION IN THE PROCESS INDUSTRIES

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

TECHNOLOGIES THAT REFLECT AN UNDERSTANDING OF PHARMACEUTICAL PROCESSING

CHROMALOX UNDERSTANDS EVERY FACET OF THE PROCESS

From flanged immersion heaters for process water applications to self-regulating heat trace cable and controls that prevent overtemperature. From gas pre-heaters that provide a cost-effective means of pre-heating gases and gas mixtures used in pharmaceutical processes to heat transfer fluid vaporizers for processes requiring high temperatures and low operating pressures. 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.

CHROMALOX MEETS YOUR SPECIFIC CHALLENGES

With that kind of experience behind us, Chromalox understands the unique challenges that bioprocessing 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.

CHROMALOX WORLDWIDE LOCATIONS



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PHARMACEUTICAL & BIOTECHNOLOGY

1 REACTOR TEMPERATURE CONTROL

Thermal fluid heat transfer systems provide heating and cooling for various reactions which require tight temperature control.

4 MIXING AND DRYING

Temperature Control Units (TCUs) and packaged boilers provide heating/cooling for jacketed mixers and shelf dryers.

7 COMFORT HEATING

Comfort heaters for work stations and room temperature control. Hazardous and nonhazardous area designs available.

10 PHARMACEUTICAL PACKAGING

Tubular, strip, and cartridge heating elements heat sealing on pharmaceutical packaging machinery.

13 IIOT GATEWAY

IIoT product gateway provides the ability to remotely access and monitor Chromalox process heating and heat trace systems. Allows for remote troubleshooting if required and utilizing the data collected can help your product and process operate more efficiently.

2 PROCESS AIR HEATING

Circulation and air duct heaters heat incoming air streams for a variety of drying requirements.

5 STERILIZATION

Boilers can be used for direct sterilization of pharmaceutical containers.

8 STEAM SUPERHEATERS

Superheat saturated steam for applications which require temperatures above the central steam system supply. Steam superheaters are also used in a variety of other drying applications.

11 RO PREHEATER

Circulation and immersion heaters preheat incoming water to help reverse osmosis machines operate more efficiently.

14 FILTER HEATERS

Filter heaters are used for gas and liquid phase filtration applications where precise and uniform heat is required on the surface of the filter housing.

3 IN-LINE HEATING

Circulation heaters heat flowing liquids and gases. Chromalox offers custom and sanitary designs.

6 CIP AND SIP SYSTEMS

Immersion and circulation heaters are used to heat water and cleaning solutions for sterilization and cleaning applications.

9 SOLVENT RECOVERY

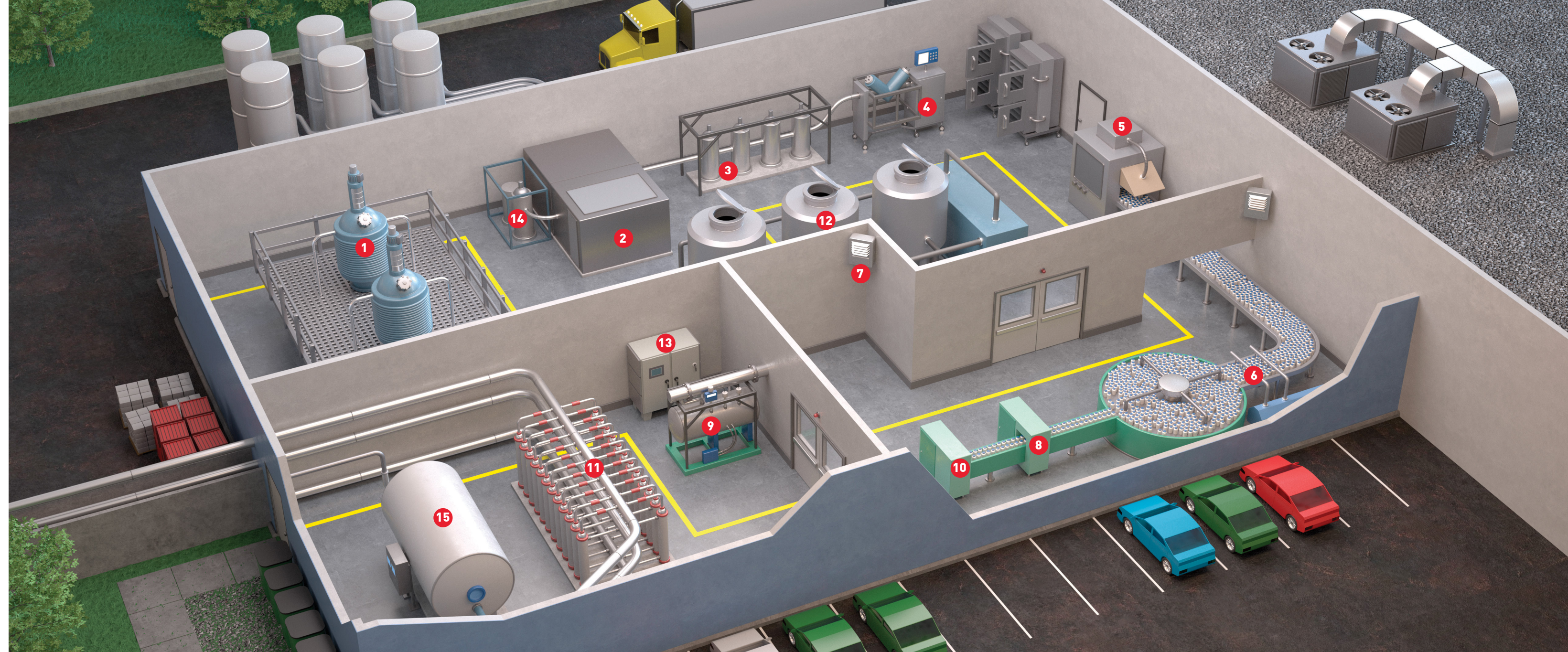
Immersion, circulation, and heat transfer systems heat distillation columns and evaporators.

12 INGREDIENT TANK HEATERS

Immersion heaters keep ingredients warm before being introduced to the manufacturing process. Chromalox LTFX model immersion heaters are ideal because tanks do not need to be drained to replace the heating element.

15 STEAM & HOT WATER GENERATION

Electric steam and hot water generators provide heating utilities required throughout the various manufacturing areas for process and comfort heating while also reducing onsite Scope 1 emissions associated with fuel fired boilers.



IMMERSION HEATERS

Immersion heaters and circulation heaters can be installed directly in the process to heat water/glycol, thermal oils, solvents, and gases.



COMPONENT & FILTER HEATERS

Original equipment manufacturers (OEMs) require small custom and standard electric component heaters. Filter heaters and other heaters can be used to provide temperature control or heat up for OEM systems and carry UL, CSA, CE and other global third party certifications.



ELECTRIC STEAM & HOT WATER GENERATORS

Units provide steam & hot water for any process need using a compact flameless package. Ready-to-install units require only water and electric power supplies for zero-emissions operation. Carbon or stainless steel construction to UL, CSA, ASME, and PED codes.



HEAT TRANSFER SYSTEMS

Our hot oil and water/glycol systems are safe, versatile, user-friendly self-contained heating and cooling packages that provide direct or indirect process heating. Preengineered and constructed with carefully matched components, these systems eliminate component selection and assembly, and provide easy installation and trouble-free operation.



HEAT TRACE AND CONTROLS

Provides freeze protection and counteracts heat loss from process equipment and piping, and prevents increase of product viscosity. Complete line of heat trace cable and installation kits available. Temperature control solutions include programmable, microprocessor-based, 1- to 72-circuit systems, and fully integrated wireless sensing and remote circuit monitoring and management of up to thousands of circuits across multiple panels.



CONTROL SYSTEMS

Chromalox is the only electric heating equipment producer offering a complete line of discrete temperature and advanced SCR power controllers, and sophisticated control panel systems and accessories to efficiently manage the most basic to the most complex and demanding heating applications. Our C2i™ technology integrates and manages these controls as part of an enterprise-wide intelligent network of temperature sensing, process heating, and temperature management.

