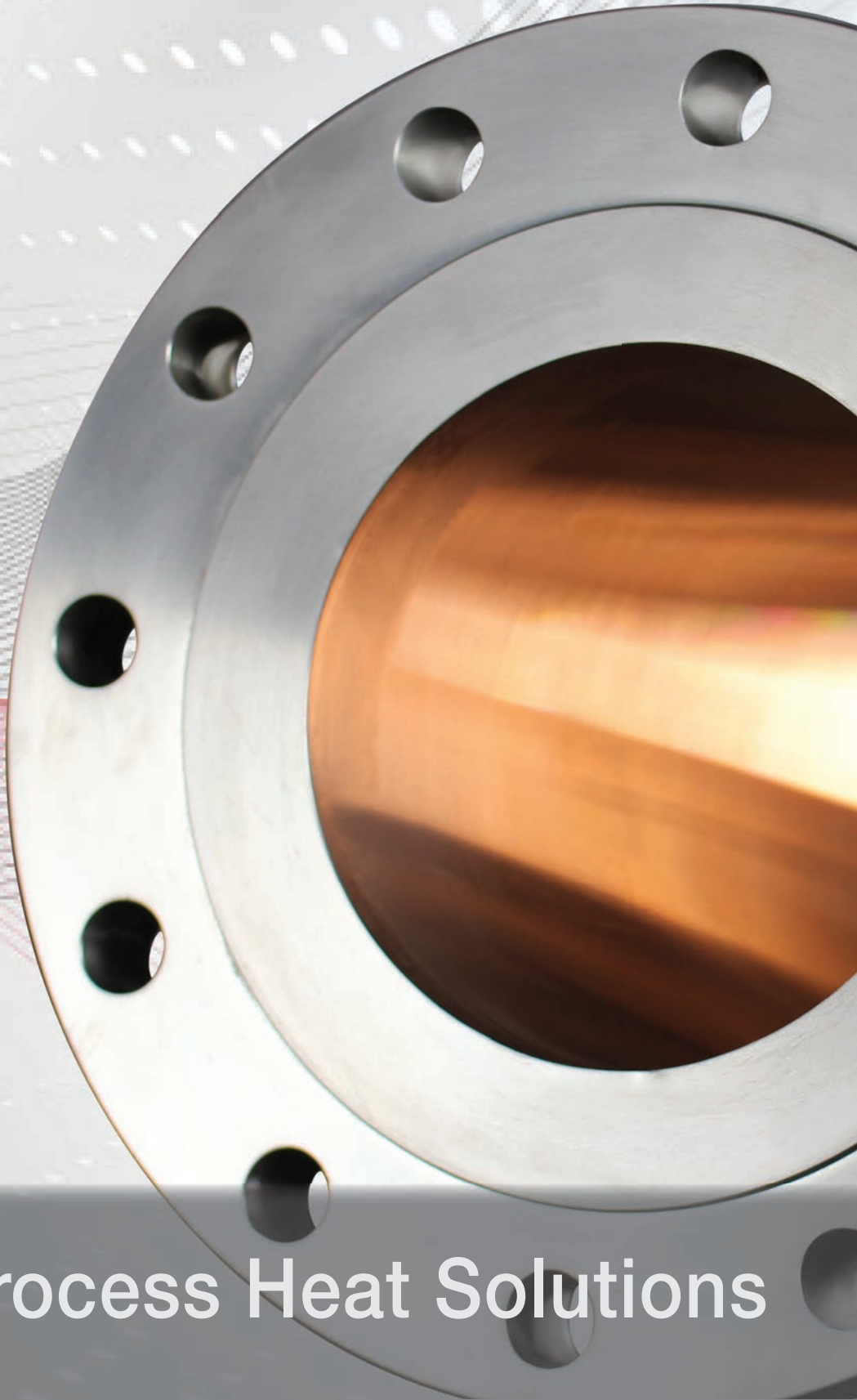
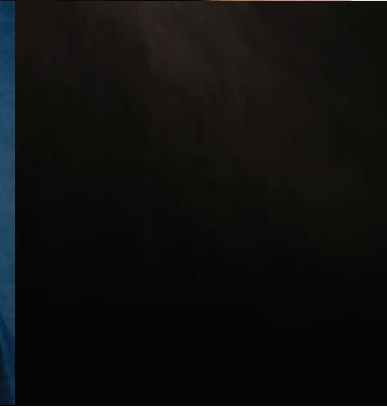
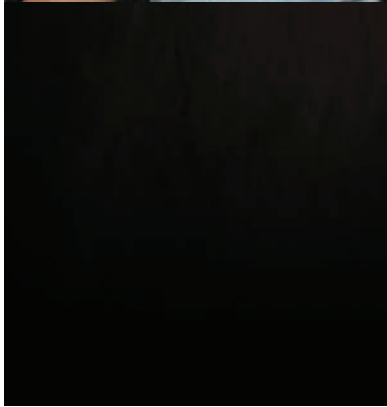
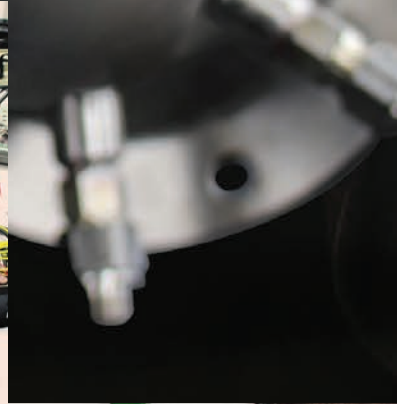
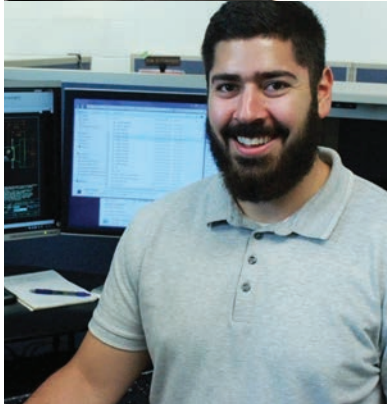
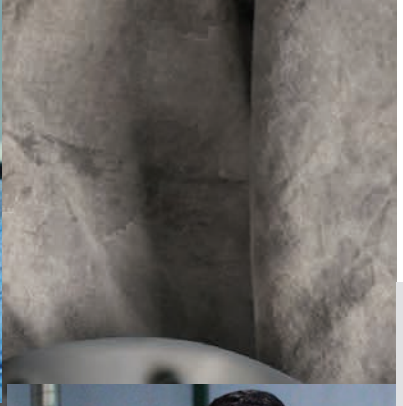
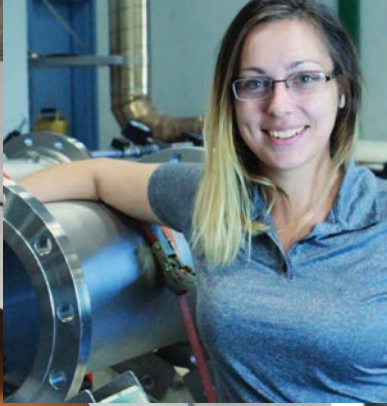




SureHeat



Custom Process Heat Solutions



Our team drives the custom solution process

At the heart of Tutco SureHeat division is a team of experienced professionals working to deliver unique, and sometimes extreme, custom solutions that delivers safe, precise, and consistent results. Our Specialty Flanged Inline Electric Air Heaters, which offer superior performance over traditional heaters, allow us to meet the needs of the most demanding applications.



We welcome the challenge of making custom heating products to satisfy specialized needs in a wide range of industries, and are committed to exceeding customer expectations throughout every step of the process. Our team's diverse skill set and breadth of experience makes us stronger. We understand the importance of producing custom heater solutions that deliver superior trouble-free performance.

Applications

Combustion Research and Engine Development test stands: Jet, auto, and diesel.

Valve testing for aviation maintenance, repair, and overhaul (MRO) facilities.

Fuel cell R&D test stands and heat-up operations.

Pollution control in SCR NOx and other Catalyst applications.

High temperature furnaces.

Pyrolysis applications.

Waste to energy processes.



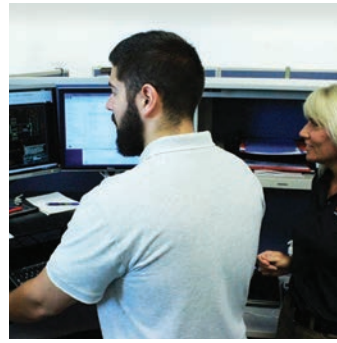
We respond quickly from the moment of first contact

From first contact, a friendly customer service specialist immediately begins learning about each customer's challenges and identifying their needs. With a complete line of proven heating products, we will often have an off-the-shelf solution for certain applications. Critical research and development solutions often require a custom heating solutions. All of our products are derived from custom solutions. We rely on customer interactions for application uses and less commonly known production integration methods.

“We are a close knit team that responds quickly and are up for any challenge!”

—Alicia Cadwell
Customer Service Supervisor

Our customer service team has the product knowledge to ask and answer the right questions. We will quickly identify whether a custom solution is warranted and begin the process of providing a solution that is ideal for the application.



SFI Advantages

Specialty Flanged Inline (SFI) inline heaters offer superior performance over conventional sheathed (“tubular” or “immersion”) style heaters because they are designed specifically for air and inert gas applications.



Our proprietary SERPENTINE element facilitates a very high power density and compact overall design. SFI heaters can be as much as 8-12X smaller than equivalent tubular/immersion designs.

With this advantage, installations become smaller, lighter, and more cost effective, with a faster heat-up and cool-down time.

Whether for a research test stand, factory production line, or key component in a product or system, our Specialty Flanged Inline heater is the right heater solution for the job.

www.tutcosureheat.com



Driven to gain a true understanding of every challenge

It's vital that our engineering team work directly with customers to gain an accurate understanding of each project from the start. During the Discovery phase, we discuss every facet of work to be performed. From the manufacturing flow to performance specifications, including required temperatures and pressures, we work to develop and discover optimal outcomes for every application.

“Our team understands the critical requirements needed for extreme applications”

—Derrick Drohan
Product Marketing Manager

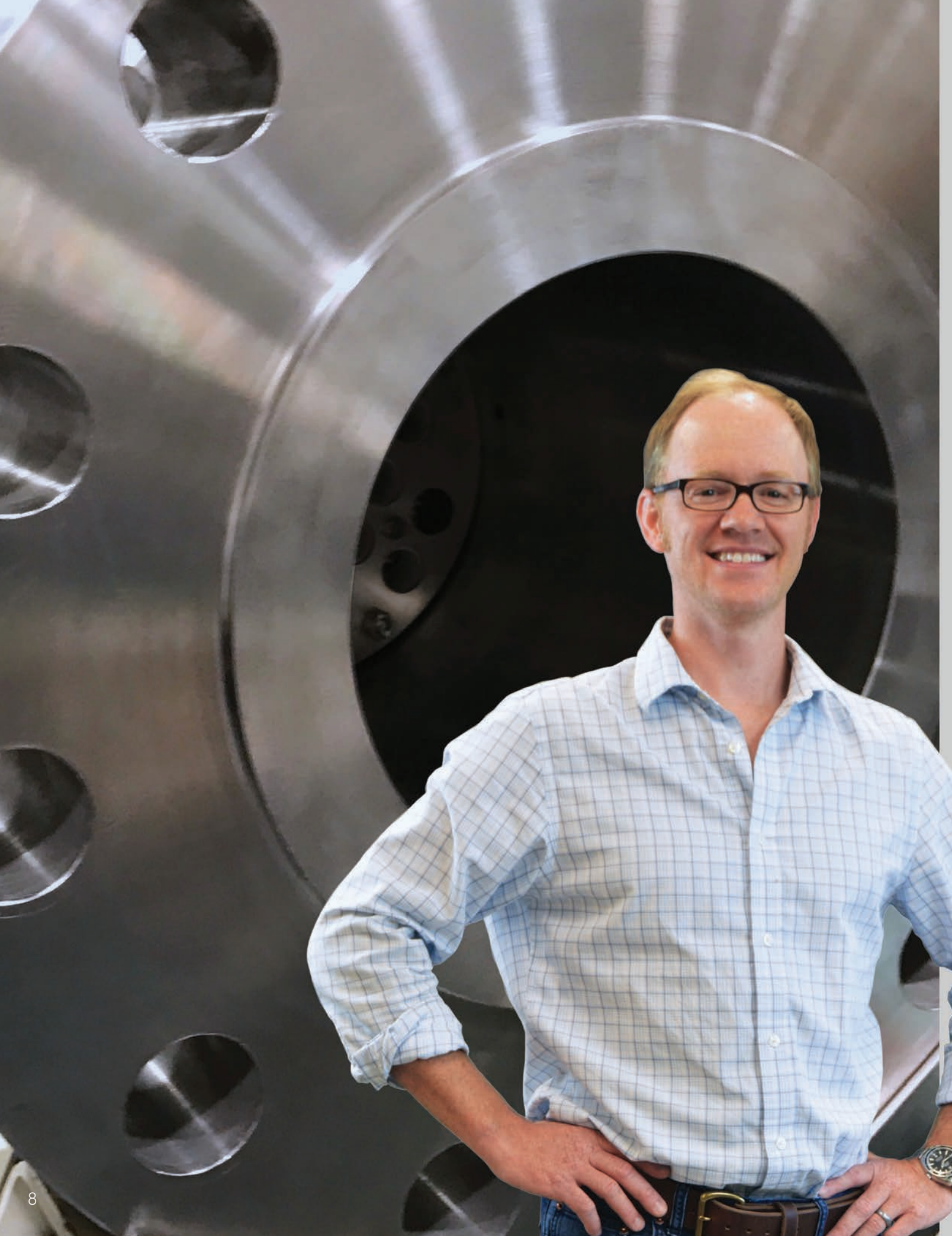
Backed by a history of providing custom heat solutions to a wide-range of applications across the globe, our in depth understanding of each customers' business and the role our heaters will play in the final application allows us to deliver unprecedented performance.



Performance

- Achieve temperatures up to 1750°F (900°C) in custom designs
- Controllability +/- 2°F. in custom designs
- Rapid temperature ramp, up to 50°C per second
- Power ratings in single heaters 18kW to 768kW Standard, 1 MW and higher in custom design.
- Pressure Ratings up to 3000+ PSI (207 Bar) standard, >1100 PSI (75 Bar) in custom design.
- Pressure vessels per ASME Section VIII Div. 1, certification services and documentation available upon request.
- Pressure Equipment Directive (PED) certification is available for European customers.
- ANSI and DIN flange sizes available.
- SCR power and temperature control cabinets.
- On-site start-up assistance and training available.
- RoHS compliant.
- Replaceable element cartridge.

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A critical review of each project provides key insights

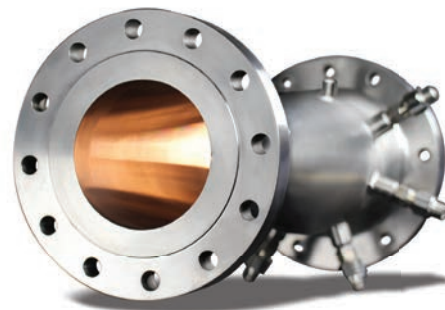
With all the vital information in hand, our knowledgeable team of engineering and manufacturing experts review each project in detail and begin developing recommendations based on technologies we have developed over the years.

“By leveraging our vast experience and past solutions we deliver proven measurable results in real world settings.”

—Matt Hargreaves

Global Business Manager - Heating Products

To insure projects move fluidly from engineering to installation, open and consistent communications are necessary to anticipate issues before they arise and avoid potential road blocks. Keeping projects on time and maximizing efficiencies is core to our business model. This flexibility and versatility makes us unique and provides an edge over our competition.

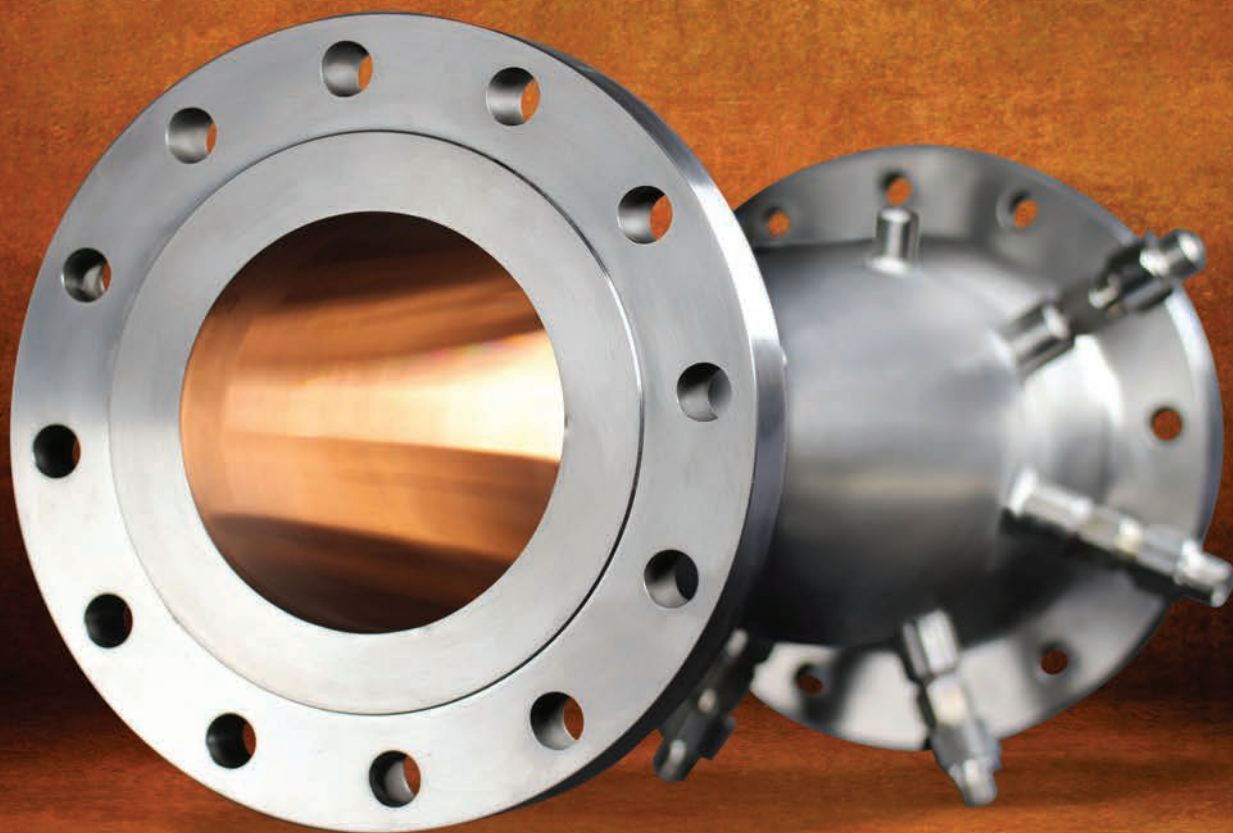


New Technologies

Growing global demand for fuel efficiency, reduced emissions, and renewable energy has given rise to research into new technologies dependent on ever increasing temperature and pressure gas streams.

Whether for R&D, Quality Testing of components, or as a key component in OEM equipment, our Specialty Flanged Inline (SFI) Heaters deliver safe, precise, and durable performance in a wide range of extremely demanding applications. Our custom SFI solutions continue to push the limits of technology.

www.tutcosureheat.com



Solutions based on a true understanding of the industry

Our engineers are not afraid to get their hands dirty. Each member of the team has hands-on expertise in every facet of the products they engineer. With years of real world experience, it's not uncommon to see them throughout the facility, sleeves rolled up and machining products or on the production floor testing a new concept.

Our engineering and manufacturing expertise allows us to immerse ourselves in the production process

Our engineering team is a consistent presence throughout each step of our process. This level of involvement makes it easy to manage projects and find the resources or answers needed to optimize and increase production efficiencies. The result is a cost effective custom solution that delivers safe, precise, and durable performance.



Control maximizes safety and performance

Tutco SureHeat's modern power and temperature control systems allow open-coil heaters to operate safely by responding fast to changing conditions. The key components to the control system include the use of a phase angle-fired or burst-fired (zero crossing) SCR power controller, PID loop temperature controller, and high-limit safety devices. These control systems can be easily configured for remote or local operator access. A K-type thermocouple probe is used for process temperature control, while another separate probe is used for a high limit. At the heater inlet is a flow sensing device to ensure the system does not operate unless a minimum flow rate is achieved through the heater. The combination of these devices ensures a safe, reliable system.

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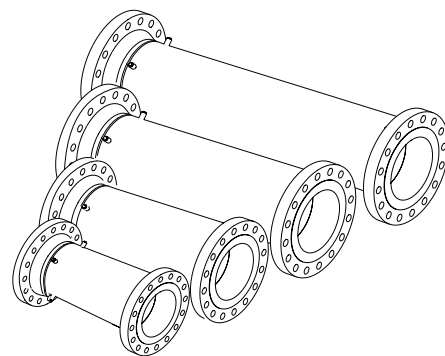
A production process that is efficient and uncompromised

We take great pride in delivering the highest quality products and solutions to our customers. Our dedicated team plays a vital role in our quality first commitment and it is reflected throughout the manufacturing process.

“Working with trusted vendors, quality materials and our process guarantees each product is manufactured to the highest quality standards.”

—Ann Libby
Mechanical Engineer

Tutco SureHeat custom air heating components are handcrafted in the USA by experts. Our facility is a completely integrated environment where every custom project is a combination of implementation to specifications and delivering above customer expectations. When it comes to creating custom process heat solutions, we have a long history of delivering reliable, low cost process heat solutions.



Size plays a critical role

We have manufactured a variety of custom heater sizes to meet the installation demands. Critical considerations are given to size and selecting the proper open coil heating element. Of primary importance is the temperature rise needed across the heater, and the air mass flow through the heater. When determining the temperature rise across the heater, you must take into consideration the heat losses that occur between the heater and the test point. This may require a higher heater temperature in order to reach a desired process point temperature. The next step to selecting a heater is to know the maximum static pressure the heater will be subjected to in order to correctly size the pipe and flange material. Depending on temperature and pressure conditions, the materials can vary from common 304 stainless steel to high performance super alloys, which is a major driver in the overall unit cost.

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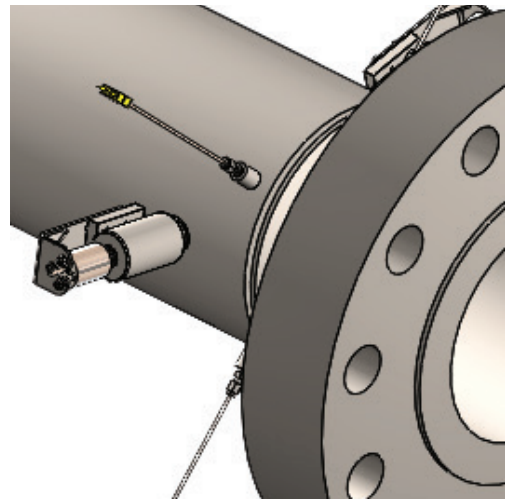
Continuing to raise the bar on service and support

Tutco SureHeat's commitment to its customers pays dividends when the final solution is delivered and installed. We work hard to insure a efficient and stress-free implementation of our solutions within the final application. Once installation is completed, undoubtedly there will be questions. Rest assured, we are always ready to respond.

“Our staff is ready to respond to customer needs and questions. We are here to support them in any way we can.”

—Ron Rittenhouse
Senior Applications Engineer

Tutco SureHeat prides itself on service and support. Our team continually pushes the limits and strives to exceed expectations. Whether it's commissioning a new highly customized heating solution or providing support for an existing solution, we affirm our commitment to each customer's total satisfaction by delivering a level of exceptional service and support unmatched in the industry.



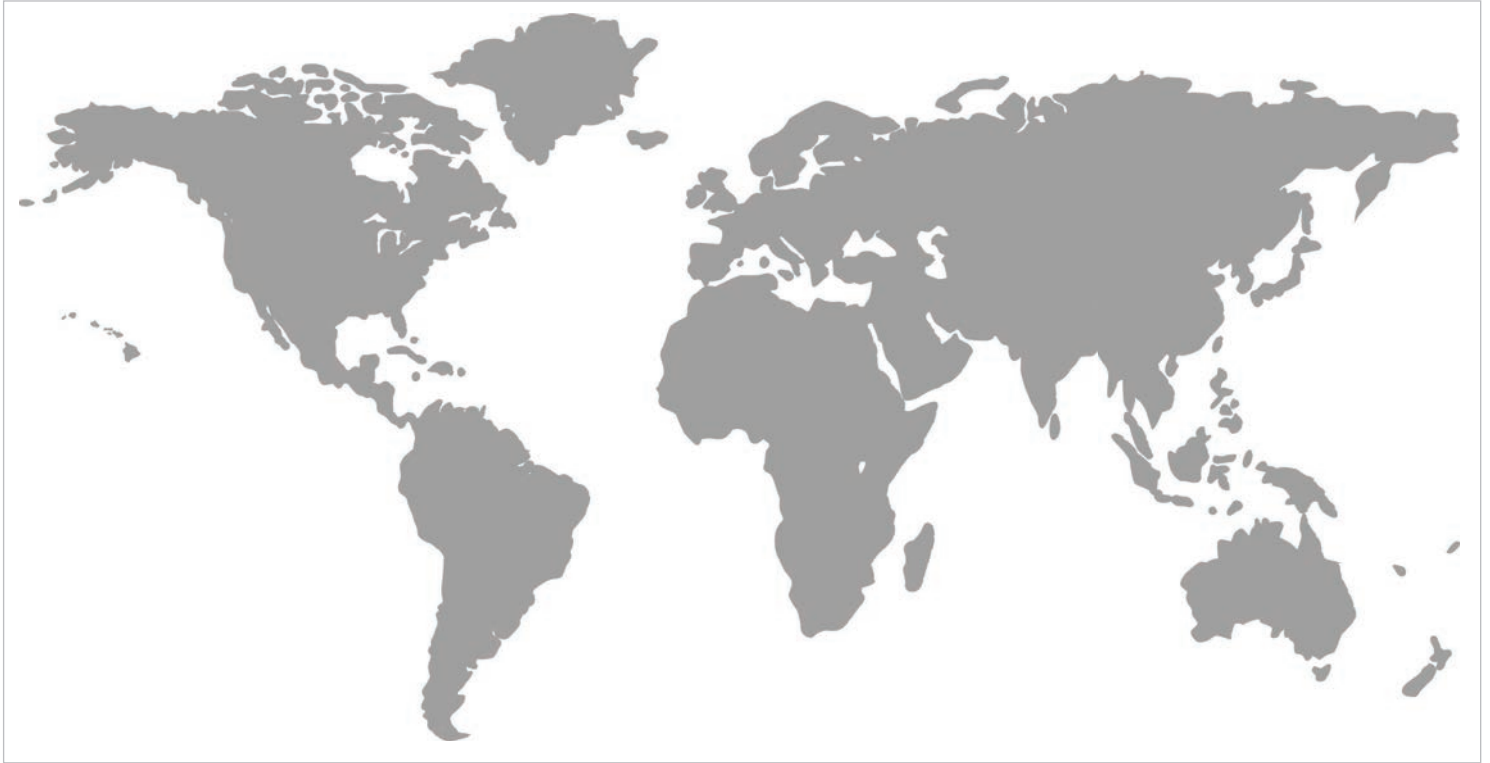
Over Temp Protection

SFI heaters continue to meet the needs of our customers by offering higher temperatures and greater pressures. SureHeat™ OTP (Over Temp Protection) is our patent-pending technology developed to ensures every SFI heater remains in safe temperature ranges and protects the elements from overheating.

Tutco SureHeat heaters are key components of critical applications where safe and accurate temperature control is vital. OTP technology delivers a solution that manages your heating process and protects your investments long term. Every SFI heating product should include Over Temp Protection.

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Worldwide Locations



TUTCO Heating Solutions Group

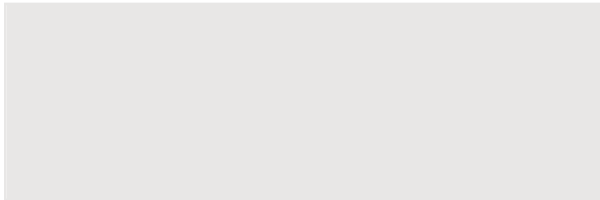
North American Headquarters

200 Ballardvale Street
Wilmington, MA 01887
USA

Tutco SureHeat

129 Portsmouth Avenue
Exeter, NH 03833
USA

Your Tutco SureHeat Distributor:



Locations:

Albania	Hong Kong	Romania
Austria	India	Russia
Australia	Indonesia	Saudi Arabia
Belarus	Italy	Serbia
Belgium	Japan	Singapore
Bosnia	Kenya	Slovak Republic
Canada	Korea	Slovenia
China	Latvia	South Africa
Chile	Lithuania	Spain
Croatia	Luxembourg	Sweden
Denmark	Mexico	Switzerland
Estonia	Moldova	Taiwan
Finland	Netherlands	Thailand
France	Norway	Turkey
Germany	North Africa	Ukraine
Great Britain	Philippines	United Arab Emirates
Greece	Poland	United States of America
Hungary	Portugal	Vietnam

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