

GAUMER[®] **PROCESS**



Company Info

Since 1962, Gaumer Process has been a major supplier of industrial electric heaters and controls to the process industries. We have built our business by providing our customers with the highest quality solution to their heating needs in the shortest time-frame. This has been accomplished by maintaining the essential items for success: excellent quality, experienced personnel, world class facilities, large inventories for quick deliveries, manufacturing capabilities to meet the toughest challenge, and thorough testing of all products. Our products are manufactured with care and quality workmanship, yet we offer fast delivery and prompt service.

Quality



With a quality program designed to the requirements of ISO 9001, Gaumer has always produced products and systems that meet or exceed our customers' expectations. With a reputation built on quality, Gaumer committed long ago to provide products and systems using only the best materials and workmanship. Extensive testing and inspection ensures that every Gaumer product and system meets the customers' specifications and provides the service that is expected from a top-quality product.

Personnel



Experienced personnel is a major reason for the success of Gaumer. We have been able to recruit and keep the personnel necessary to provide the very best solution to each customer's heating needs.

The sales department draws upon four decades of skilled performance to offer a wide range of options to the customer.

Our commitment is to be totally responsive to our customers by providing cost-effective solutions that meet their heating requirements.

With registered professional engineers on staff, the engineering department provides solutions to meet the most demanding specifications. Our project management capabilities ensure that projects progress smoothly and deliveries are timely.

Gaumer has the benefit of many years of experience in all aspects of electric heating and controls. Our manufacturing departments have built process heating systems for everything from “air to zinc”. It is safe to say that we have seen your application before and have expertise in building it. With our expert team, quality is foremost and deliveries are prompt.

Manufacturing Capabilities



With four manufacturing departments in our facilities, we provide a thorough and timely solution to our customers' needs.

The processes used in our heater department allow us to manufacture flanged and screw plug heaters to exacting tolerances. Our in-shop testing enables us to validate the integrity of our manufacturing procedures as well as the quality of our components. This thorough testing reduces problems in the field upon heater start-up and assures long life in the application.

Our fabrication department has a complete line of welding equipment, material handling equipment, and testing capabilities for manufacturing heater bodies, vessels, and skids to provide a total system for our customers.



Our controls department manufactures control panels (NEMA 12, 4, 4X, and 7) for our heaters and heating systems. Our skilled personnel conduct extensive testing on our panels so that our customers can feel confident that the panel will function in the field as it was designed.

Gaumer's machine department and metalworking facility allows us to manufacture each component used in our equipment to demanding standards. This is especially critical when our customers require total systems manufactured to their specifications.

Gaumer is an ASME code certified shop and manufactures heaters and vessels stamped to ASME Section VIII, Division 1, “U”. Gaumer heaters and control panels can be Underwriter Laboratory listed, and we can provide agency approvals to U.S., Canadian, Australian, European, and UK standards.

Inventory

Success in on-time delivery is made possible by maintaining substantial inventory. Gaumer has a comprehensive inventory of completed products on the shelf which allows us to meet our customers' heating and control needs with same-day shipping. The inventory includes components and raw materials necessary to build our heaters, control panels, and heating systems. Gaumer is known for having the fastest delivery in the industry.

Facilities

With over 35,000 square feet of office, warehouse, and manufacturing space located in Houston, Texas, Gaumer continually strives to provide our employees with the very best work environment and equipment to perform their jobs. Our state-of-the-art computer system links customer applications with related quotations, orders, engineering calculations, shop work orders, material controls, purchases, schedules, routings, and shipping documents. Our automation minimizes the possibility of delays and errors. All departments work with the most modern equipment for manufacturing and testing.



Our location, in the fourth largest U.S. city with port access and an international airport, allows us to ship our products to clients by land, sea, or air. This shipping flexibility permits the customer to choose the method of shipment that best suits his needs.

Testing

Gaumer conducts extensive research and testing on the heating of liquids and gases to determine and refine the engineering data. This data provides the foundation for selecting the optimum heating and control solution for each application.

Every heater, control panel, and heating system manufactured by Gaumer is subjected to thorough testing prior to shipment. Our heating systems are run-tested with the customer in attendance to show that the system performs to the specifications. Our in-house simulation equipment ensures that control systems perform as designed.

Repairs and Reconditioning

Gaumer is the industry leader in reconditioning all types and brands of electric process heaters. Before discarding an inoperable heater or control panel, please contact Gaumer to discuss your options. We will provide a no-cost assessment of the problem and a quotation for repairs and reconditioning or replacement.

Customer Care

In today's operating environment, most companies choose to hire specialists to assist in the installation, commissioning, and start-up of vendor equipment. Gaumer has a qualified staff to assist our customers in this area. Our specialists work with customers and contractors to ensure that the Gaumer equipment is properly installed and commissioned for start-up anywhere in the world.

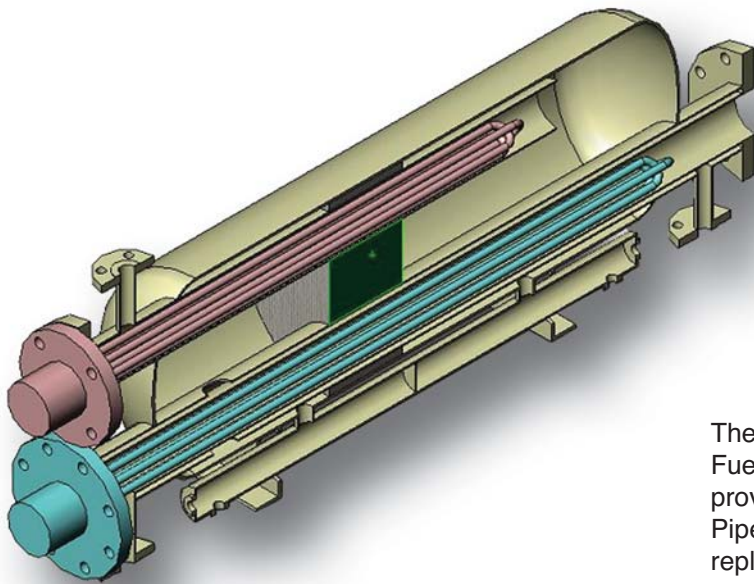
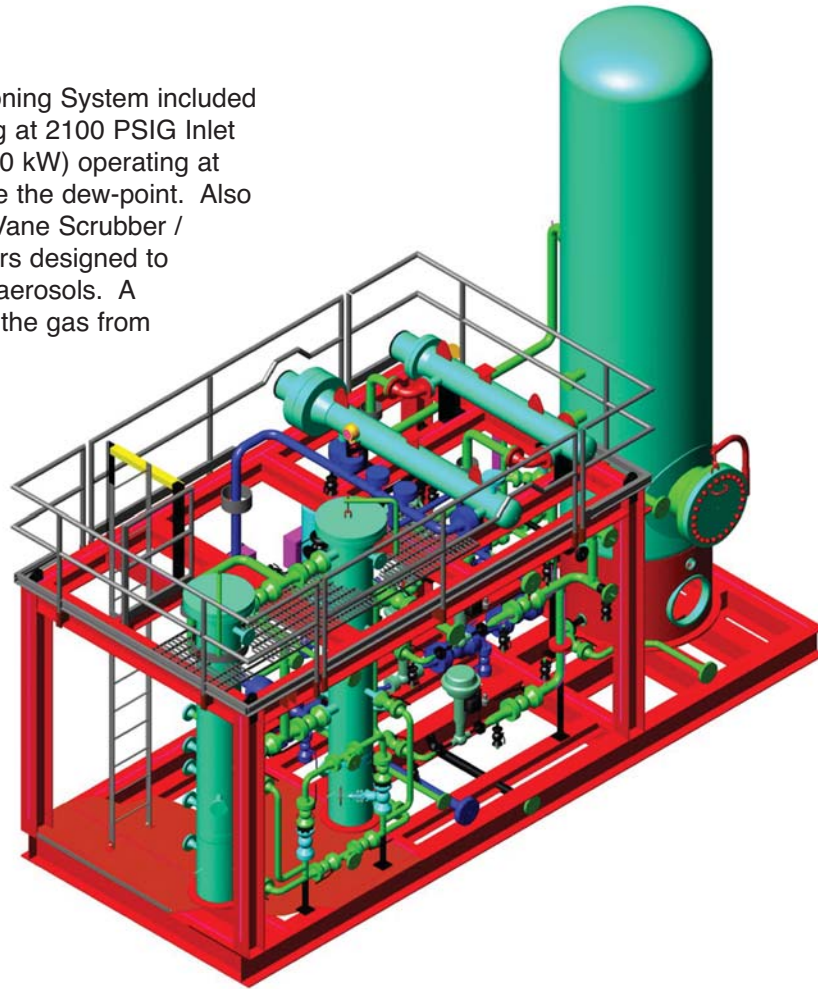
Gaumer staff is available twenty-four hours a day to help solve field heating problems. If the problem cannot be solved over the telephone, we will dispatch one of our trained specialists to help determine the cause of the problem and find the solution. Our vast inventory will assist in getting a customer back on-line in a timely manner.

With decades of experience, a commitment to quality, fast delivery, and a dedication to providing our customers with the best solution to their heating needs, Gaumer Process is the answer.



Fuel Gas Conditioning

This 7 MMSCFD Fuel Gas Conditioning System included one Pre-Heater (200 kW), operating at 2100 PSIG Inlet pressure and one Super-heater (120 kW) operating at 500 PSIG to heat gas stream above the dew-point. Also included were a 54" OD, 3 Micron Vane Scrubber / Demister, Duplex Filters / Coalescers designed to remove .1 micron of materials and aerosols. A pressure reduction station reduced the gas from 2100 PSIG to 500 PSIG.



The Gaumer Patent Pending ElectroClean Fuel Gas Conditioning System is designed to provide Gas Turbine-Quality Fuel Gas from Pipeline-Quality Fuel Gas. This system replaces the conventional fuel gas conditioning system in a lighter compact package. An Optional Filter/Coalescer is available where fine filtration is required.

Circulation Heaters



"U-tube" circulation system commonly used for heating gases as well as liquids. Both pressure drop and venting problems can be reduced with this design. Insulation jacket installed at factory.

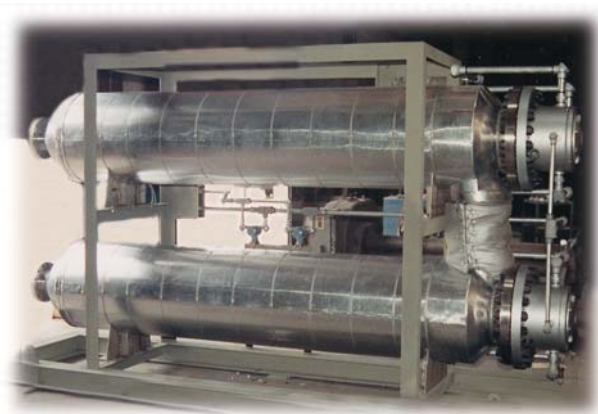


Four zone, 1.9 megawatt hydrogen heating system rated for hazardous area designed for 650° F. discharge temperature. This system was engineered, designed, and manufactured within six weeks to meet customer's delivery requirements.



Gaumer has Circulation Heaters in more than 5000 different configurations with capacities from .1 kW to 1200 kW. Each configuration is available in NEMA 12, 4, and 7.

1200 kW liquid heating package rated NEMA 4 for outdoor installation. Control Panel Assembly (not shown) was mounted indoors.



800 kW steam superheater system designed for regeneration of desiccant beds. Control panel was remotely mounted.



Fuel Gas Heater with Local Purged Control Panel for Class I Div 2 C, D installation. Package included a rain and sun shield. All wiring was done prior to shipment for ease of customer installation. The dual chamber system ensures adequate flow over the heater to reduce the temperature of the heater elements.

Blower Packages



Small electric heated recirculating system capable of heating 500 SCFM air to 500° F. against 12 inches of water static pressure. System was run-tested at field conditions prior to shipment.



High-pressure impingement system designed for heating air from ambient to 600° F. against 26 inches of water static pressure. Assembly designed to mount below grade with control panel assembly at eye level above grade.



Recirculating heating-moisturizing system designed to provide 300 SCFM air between ambient and 130° F. System included a Gaumer-designed humidifying chamber capable of adding sufficient water to maintain a controlled 50%-100% relative humidity.



Recirculating oven subassembly included a packaged electric heater, blower, and control panel assembly. Customer supplied oven box.

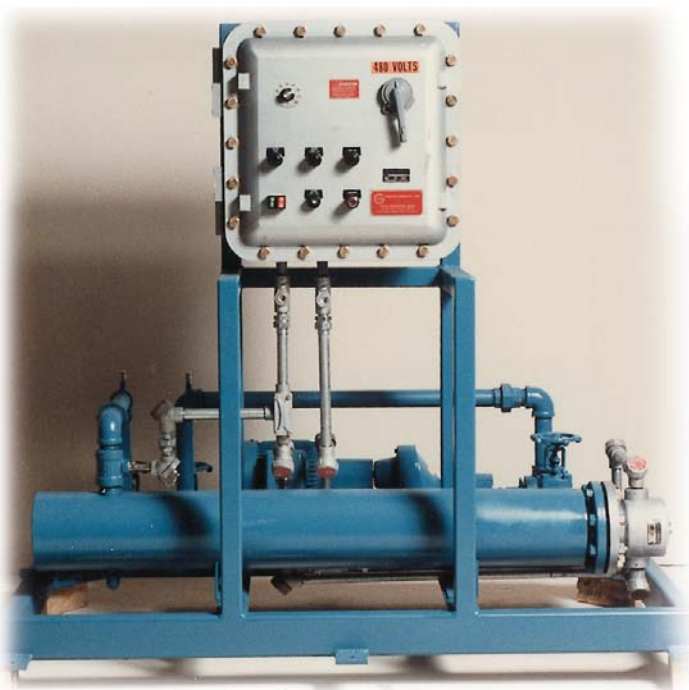
Pump Systems



Oil Separator Heater System designed to be easily moved between locations. Note dual skid arrangement with pump skid recirculating liquid through the heated tank skid.



Triple zone Liquid Heating System mounted on a single frame with a common expansion tank.



Fuel oil pre-heater package designed for preheating fuel oil for a boiler.



Electric Heating / Air Cooling package with reservoir tank. Transmission fluid heating system for preheating fluid prior to transmission testing. System included cooler package for full temperature control.

Hot Oil Systems - Standard



Standard GHOS Hot Oil System with the customer's required elevated expansion tank. System was tested as pictured at factory. Expansion tank was removed for shipment.



Standard GLOS Hot Oil System featured a centrifugal pump in lieu of a positive displacement pump like the GHOS Series.

Gaumer has 65 different configurations of Hot Oil Systems with capacities from 10 kW up to 1200 kW. All 65 configurations are available with air cooling or liquid cooling options. Each configuration is available in NEMA 12, 4, and 7. Some Oil Systems are available for rent.



Standard GHOS Hot Oil System painted in the customer's specified color. The pump was mounted above the horizontal heater chamber.



Standard GHOS Hot Oil System with a side panel removed. Note the internal insulated piping and the built-in oil collector sump under the pump for maintenance purposes.

Standard GHOS Hot Oil System finished in the customer's specified color. Note the Gaumer proprietary buffer tank. The buffer tank is designed to solve oil degradation problems by only allowing oil at ambient temperature to reach the expansion tank.



Hot Oil Systems - Modified



Modified GLOS Hot Oil System with an oversized expansion tank to accommodate the large volume of the customer's system. Temperature control valves were included for flow modulation to multiple zones.



Modified GHOS Hot Oil System provided electric heating and water cooling to the customer's process.



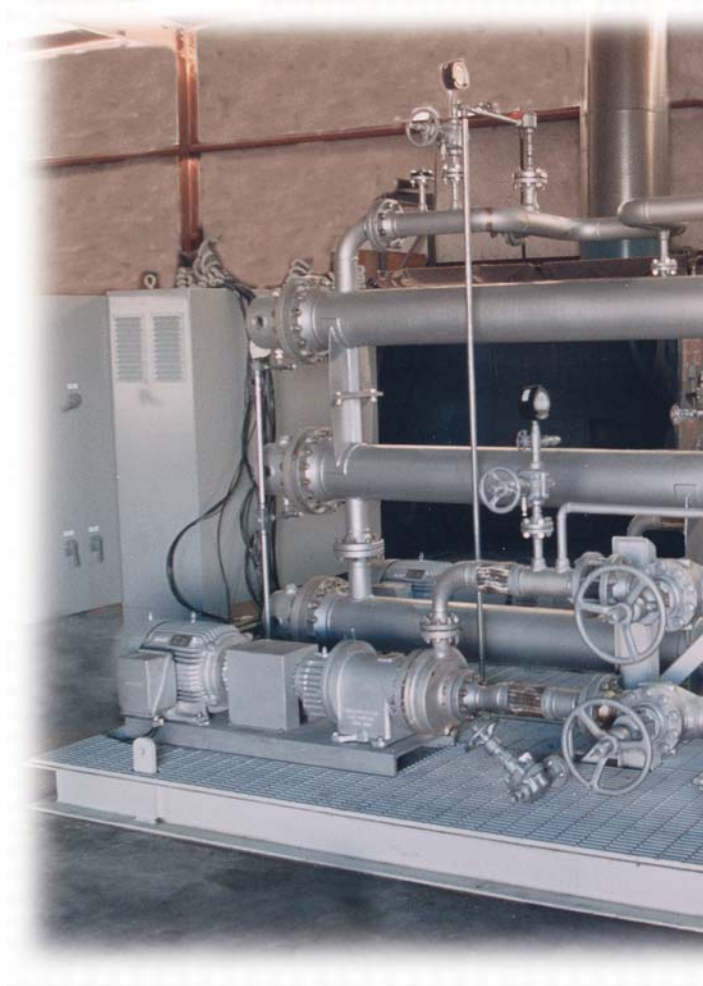
Modified GHOS Hot Oil Systems provided multi-zoned heating to the customer's process.



Hot Oil Systems - Custom



800 kW dual zone Hot Oil System designed for Class I, Group D hazardous location. Unit included spare magnetic drive pumps, special thermal expansion loops, and customer specified paint.



300 kW Hot Oil System designed for Class I, Group D hazardous location with 100% SCR control capable of maintaining the recirculating 600° F. fluid within 1° F. System included vertical expansion tank and vapor recovery tank.



Dual zone 600 kW / 200 kW independently controlled. Included online spare magnetic drive type pumps up to 650° F. located in a petrochemical plant.

Hot Oil Systems - Custom



Single zone 300 kW Hot Oil System designed for installation outdoors at a petrochemical plant for heating two extruder dies. System featured 100% SCR control.

400 kW Hot Oil System designed for continuous operation in a petrochemical plant at 650° F. System was designed for installation in a hazardous location and included magnetic drive type pumps.



Hot Oil System.
designed to heat extruder to



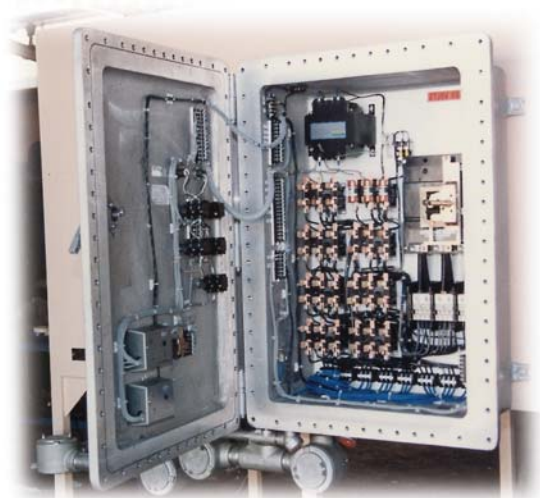
800 kW dual zone Hot Oil System for use on an extruder. System included canned motor pumps. Skid was designed for Class 1, Division 2 hazardous location. Control panel remotely mounted in a non-hazardous area.

Control Panels



Type SCPA multi-circuit control panel suitable for free-standing installation near heating package. Over-temperature protection and safety magnetic contactors provided on all circuits. NEMA 4 available with X, Y, Z purge to meet hazardous location requirements.

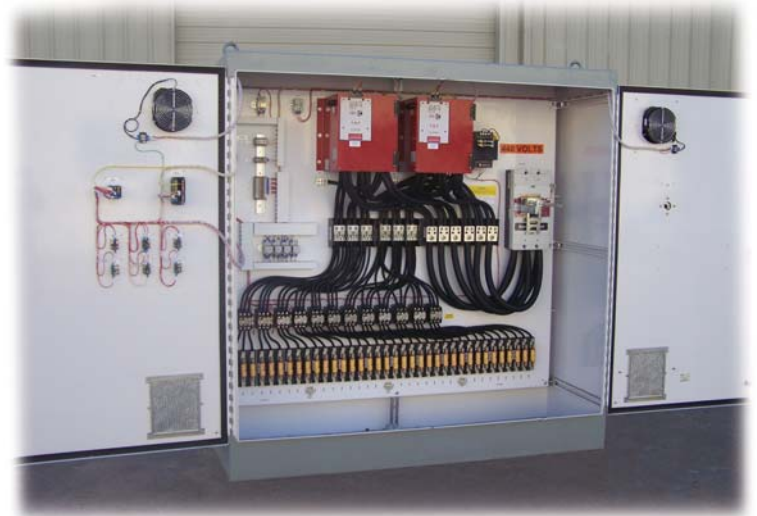
Gaumer Control Panels are designed in over 200 different configurations with capacities from 6 kW to 2100 kW. Most configurations are available in NEMA 12, 4, and 7.



Standard CPA control panel assembly designed for installation in a Class I, Division 1, Group D, hazardous location. Gaumer can supply assemblies to meet Class I, Group B & C environments also.



Type CPA control panel assembly composed of six (6) separate control circuits suitable for outdoor installation. The gasketed window made possible the visual inspection of temperature conditions during operation. This system restricted the changing of temperature set points without shutting down the system and opening the enclosure.



Type ZPA control panel assembly designed for remote mounting from heater system package. System included capability to provide shorted SCR warning to instrument control room personnel.

Standard SCPA two circuit control panel. External heat-sinks designed to remove heat generated by SCR controls.





This custom double door oven capable of heating small metal parts of various sizes to 650° F. Includes control panel assembly and blower package.

This continuous web drying oven enclosed the multi-pass conveyor system, which moved the product through the oven. Unit was configured to fit both the available space and conveyor system.



This oven with top mounted blower package included a recirculating blower and an exhaust blower. A standard CPA type control system met the customer's temperature accuracy requirements.



This trailer-mounted oven was designed to move to multiple customer sites.



This walk-in oven measuring 6 ft. wide x 6 ft. long x 6 ft. high reaches temperatures of 600° F. with 60 kW of electric power. The recirculating ductwork on the top was unique to this application.



This natural convection type walk-in oven provided adequate temperature without the use of a recirculating blower. Special care was given to the layout of the heating system.

Special Systems / Applications



Custom-made testing and calibrating device capable of providing accurate temperatures to 950° F. with a rapid heat-up and cool-down.



Clam shell heaters used for heating candle filters on an extruder line. 12 kW total.



Custom quartz and CPVC circulation heater and control panel for heating highly corrosive chlorine gases.

Custom-made "hot air gun" capable of accurate temperatures at higher static pressures than is found in the off-the-shelf type unit.



Gas Regeneration Heater designed for hazardous location installation.



Gaumer electric steam boilers are available from 3 to 1200 kW.

Special Systems / Applications



Jacked Heated Hopper has both an inner and outer wall. A heat transfer fluid was circulated through the space between these walls. The flanged connections and the Hot Oil System are not shown.

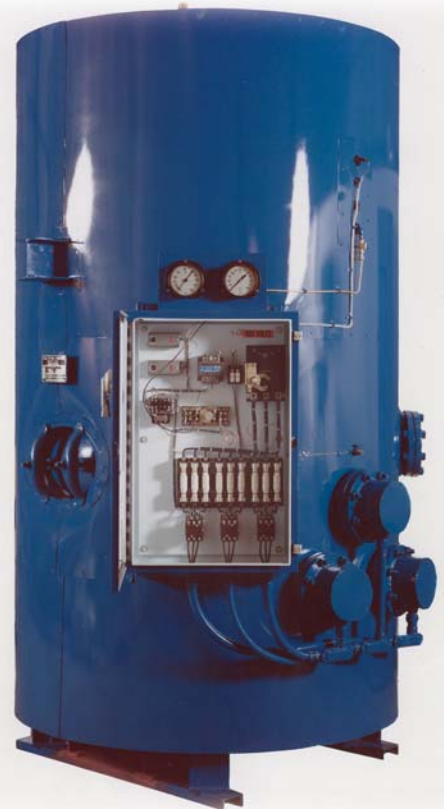


Dowtherm Vaporizer Package designed for Class I, Division 1, Group D Classification. Complete assembly designed and manufactured by Gaumer.

Asphalt Tank Heater complete with pre-mounted and wired control system. This unit designed for installation in a Class I, Division 1, Group D Classification.



The heating chamber module of an Ammonia Vaporizer Package. Skid, valves, and controls are not shown.



400 gallon water heater for shipboard use. U.S. Coast Guard approved. ASME Section IV.

Heated Tanks



Phosphatizing Tank features “double tank” construction with a special heat transfer liquid in the outer tank that assures even heat and trouble-free service.



Laboratory test tank with high heat capacity and high temperature capabilities. Note specialized insulation package.



Cylindrical Heated Tank featured “double tank” construction with a special heat transfer liquid in the outer tank.



Insulated heated rinse tank.



Rectangular Hot Melt Tank with “double tank” construction and a special heat transfer liquid in the outer tank which allows temperature control to ± 2 degrees.

Portable heated calibration tank with agitator.

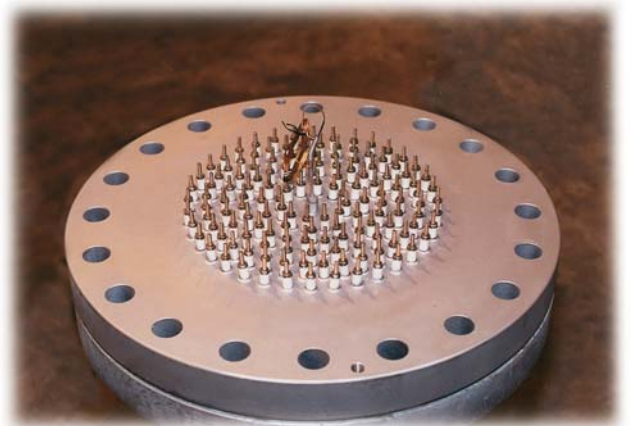
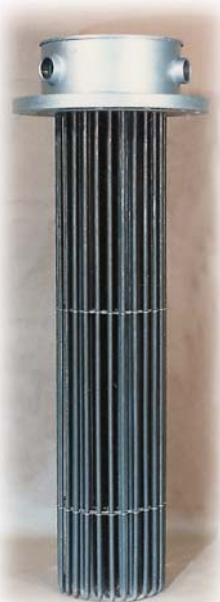


Flanged Heaters



Gaumer has Flanged Heaters in more than 4300 different configurations with capacities from 1 kW to 1200 kW. Each configuration is available in NEMA 12, 4, and 7.

- ❖ Flange Sizes - 2", 3", 4", 5", 6", 8", 10", 12", 14", 16", 18", 20", 24", 30", 36"
- ❖ Flange Ratings - 150#, 300#, 400#, 600#, 900#, 1500#, 2500#
- ❖ Materials - Steel, 304SS, 316SS, 321SS, Incoloy, Inconel, Chrome / moly, Monel, & Hastelloy
- ❖ Immersed Length 9" - 180"
- ❖ Standard
 - Incoloy 800 Sheath Material
 - All Welded Construction
 - Hydrostatic Tested
 - Sealed Terminals
 - UL, CUL Listed
 - Evenflow Construction, Alloy Spacer rings where needed
 - Flying Leadwires with High Temp Rating
- ❖ Many options available



Screw Plugs



Gaumer has Screw Plugs in more than 2200 different configurations with capacities from .1 kW to 68 kW. Each configuration is available in NEMA 12, 4, and 7.

- ❖ Screw Plug Sizes (NPT)
 - 1/8", 1/4", 1/2", 3/4", 1", 1-1/4", 1-1/2", 2", 2-1/2", 3"
- ❖ Immersed Length - 6" - 180"
- ❖ Material - CS, 304SS, 316SS
- ❖ Standard & Solid Screw Plug
 - Incoloy 800 Sheath Material
 - All Welded Construction
 - Hydrostatic Tested
 - Sealed Terminals
 - UL, CUL Listed
 - Flying Leadwires with High Temp Rating where needed
- ❖ Many options available



Over-the-side Immersion Heaters



Bunghole Heater designed to fit through the opening in a 55 gallon drum and heat the contents.

Over-the-side heater with tank cover-plate included as part of the heater assembly. Thermostatic control included in the heater.



Gaumer has Over-the-side Immersion Heaters in more than 2500 different configurations with capacities from 10 kW to 1200 kW. Each configuration is available in NEMA 12, 4, and 7.



Type LC over-the-side heater designed for insertion into a circular tank. Assembly included thermostatic control.

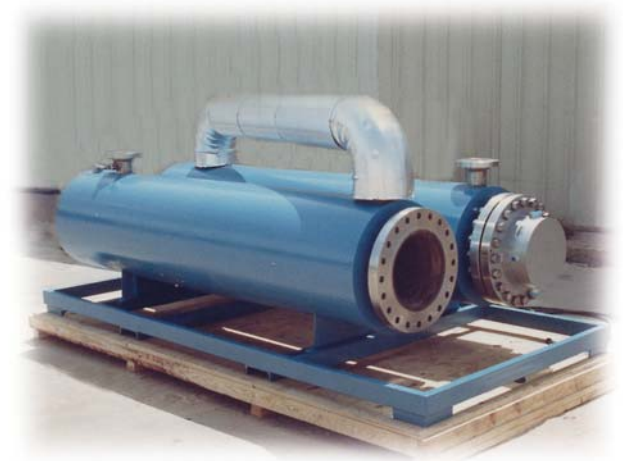


Type LH (horizontal) over-the-side heater with integral cover plate. Also available, Type LV (vertical) which has a vertical mounted heater bundle. Heater assembly available with bundle sizes as large as 8 inches in diameter and lengths to 165 inches as standard.

Duct Heaters



Type DHT Process Air Duct Heater capable of heating recirculating air to 450° F. Standard design included rectangular construction. Optional base shown in picture will hold blower and transition duct.



Dual chamber non-recirculating heater designed for air heating where a high temperature rise is desired. The entire system was under high pressure.

Gaumer has Duct Heaters in more than 5600 different configurations with capacities from .1 kW to 4300 kW.

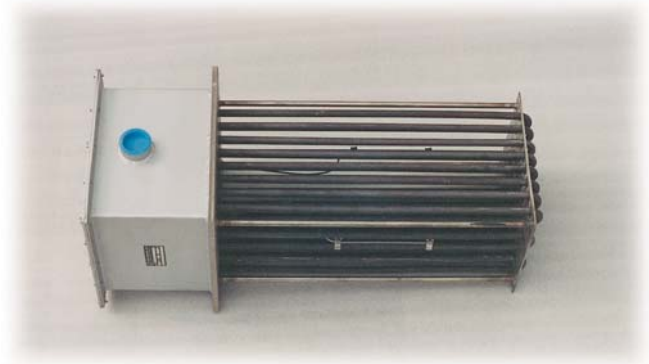


Type D Hi-Temp Duct Heater designed for low pressure non-recirculating applications where high temperature rise of the air is required. Standard design included insulation jacket and overheat sensing thermocouple.



Packaged Electric duct heater assembly with explosion proof control system.

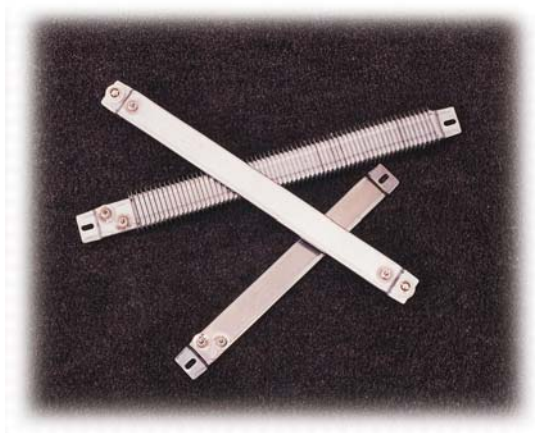
Type IDH Industrial High Temperature Duct Heater suitable for temperatures to 800° F. Available ranges of 6 kW to 480 kW.



Component Heaters & Instruments



Type GTB band heater with optional offset terminal enclosures. Sustained operating temperatures to 1000° F. are common with this unit.



Strip heaters available in stock in lengths from 5.5" to 42.5" with and without fins.



Specially bent tubular heater. Gaumer stocks large quantities of hundreds of different kinds of these heaters.



Type SUN high temperature strip heater with optional offset terminal housing. Standard design calls for terminals at one end.

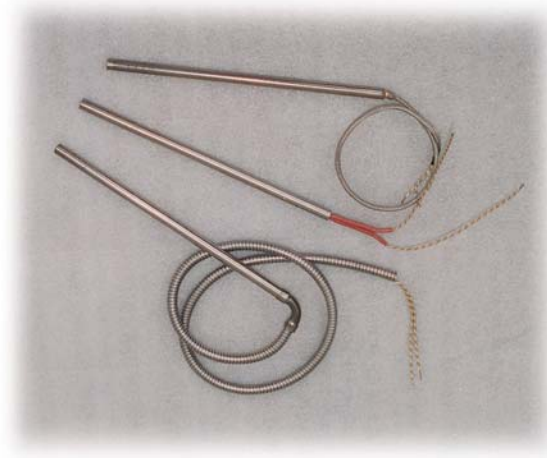
Gaumer has Component Heaters in more than 3400 different configurations including cartridge, strip, tubular, band and drum heaters.

Thermocouple / Thermowell Assembly made from in-stock parts.



Two kinds of wrap around drum heaters. Top unit is Type F (flexible) and the bottom unit is a Type GDH semi-rigid. Stocked assemblies include 5 gal., 15 gal., 30 gal., and 55 gal.

Cartridge heaters available in stock from 1/4" thru 1" diameters in lengths from 1" to 24".





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