

Heating Solutions for Natural Gas Applications



Cast Aluminum Solutions designs and manufactures critical heating and vaporizing components for the natural gas industry. Our CAST-X Heaters are a high-performance standard product, with a number of outstanding features relevant to natural gas processors. CAS also manufactures custom-engineered heaters to meet specific gas heating or vaporization requirements.

Whether you're an end-user in the field, a power plant with natural gas powered turbines, or an OEM for gas dispensing equipment, CAS is here to help you reduce inefficiencies, run faster, and add value to the customers you serve.

PRIMARY PRODUCT & SERVICE OFFERINGS

- CAST-X Inline Heaters, Available in 6 sizes, for Heating Natural Gas, CNG, LNG, and Other Flammable Media.
- Cylindrical Fuel Conditioning Heaters for Large-Format Natural Gas Supply Lines
- Custom Valve Heaters and Heated Components
- Advanced Engineering & Thermal Modeling for New Product Development Projects
- High-Volume Manufacturing of Precision-Engineered Heated Components for the Natural Gas sector

APPLICATIONS OUR HEATERS FIT INTO

- Gas Metering Stations & Pressure Reduction Stations
- Fuel Gas Conditioning
- Dry Gas Seals for Compressors & Turbo Expanders
- Tapping & Testing Applications (sample vaporization)
- Soil Evaluation & Mud Analysis
- Transport & De-Tanking Processes
- End-Customer Dispensing Applications

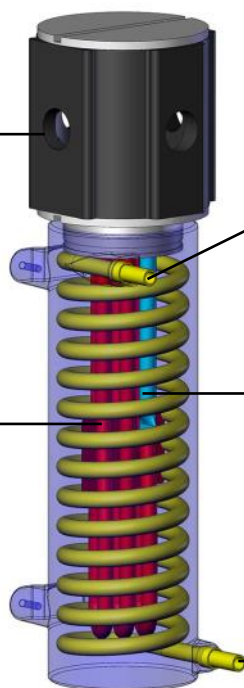
The CAST-X Heaters:
A Standard Product with Exceptional Capabilities

XP Electrical Enclosure:

Several terminal enclosures are available, including NEMA and ATEX-certified explosion-proof versions, as well as NEMA 4 certified water-resistant enclosures.

Media Doesn't Contact Heating Elements:

Heat elements are cast into the aluminum heater body, indirectly transferring heat to the SST flow-tubes and the process media. The liquid or gas being heated never contacts the heating elements.



Stainless Steel "No Contact" Flow-Tubes:

Heated media is isolated in our SST flow-tubes, so it never contacts the heating elements. Flow-tubes are compatible with high pressure processes, perfect for many natural gas applications. Smaller CAST-X units have single flow-tubes, and larger models are available in dual-tube configurations.

Temperature Sensors in Heater Body:

To accurately monitor operating temps, CAST-X Heaters feature thermocouple or RTD temperature sensors located in the heater body.

Safely Heat Flammable Gases & Liquids.

- Natural Gas Vaporization
- CNG and LNG Applications
- High-Pressure Compatible
- Compensation for Joule-Thomson Cooling



CAST-X Heaters: Available in 6 base models, from 1 to 60 kW. Our bronze CAST-X High Temp models achieve 1110°F / 600°C.

CAST-X Heaters: Several Sizes - Multiple Applications

- Soil Analysis / Mud Evaluation. CAST-X has the twin benefits of high-pressure operability and safely heating hydrocarbons.
- Gas Cabinet / Trim Heaters, for process optimization
- Inline installations on gas metering stations and field-based pressure regulation stations, to compensate for J-T cooling.
- Fuel Gas Conditioning: CAST-X is appropriate for small turbines & fuel loads. Larger fuel demands are met by our cylindrical heaters, mounted onto fuel supply lines.
- Vaporization for Sample Tapping: Small CAST-X units are perfect for field vaporization & gas sampling systems.
- Dry Gas Seal: With a CAST-X Heater's ability to safely heat field gas at high pressure, there's no need for external seal gas feeds.
- Dispensing Applications: CAST-X Heaters fit with de-tanking and dispensing stations for vehicular natural gas systems.



A small footprint helps makes CAST-X units compatible with rig-based mud analysis labs.



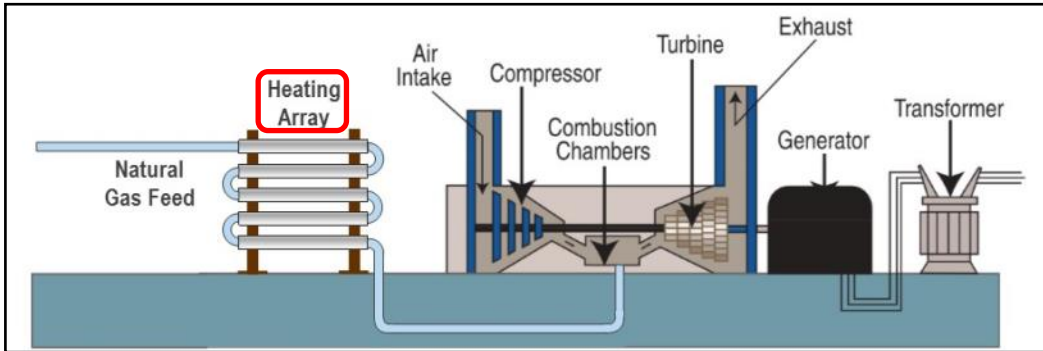
CAST-X is used widely in dry gas seals for turbo expanders and centrifugal compressors.



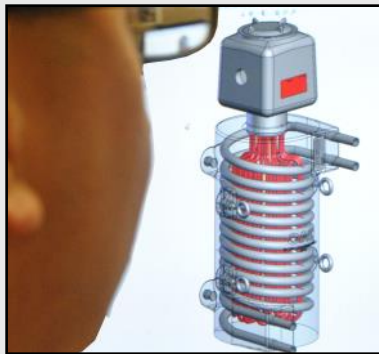
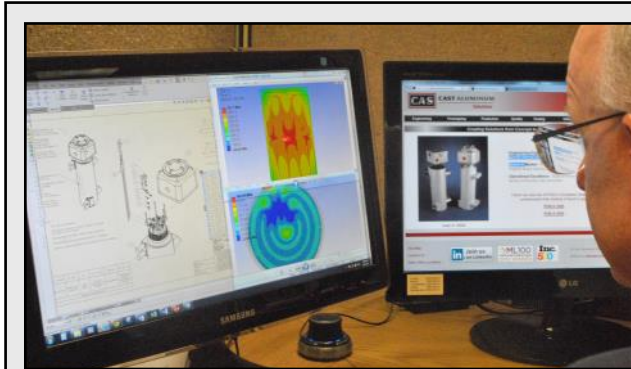
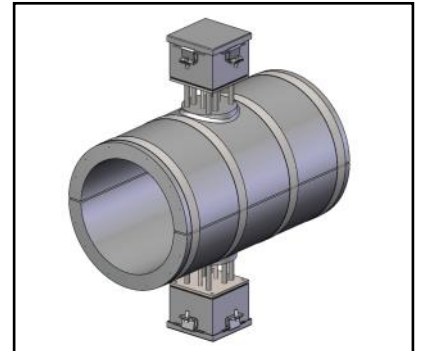
CAST-X Heaters control gas depressurization temps in gas metering stations.



Small CAST-X models are used in vaporizing units, to test gas samples prior to shipping.



For grid-level power generation, Cast Aluminum Solutions offers cylindrical fuel conditioning heaters. These can be mounted in an "S" pattern rack or along a straight-pipe feed. These heaters reduce cold start inefficiencies by pre-heating fuel infeeds.



Cast Aluminum Solutions offers a range of engineering support and product development services:

- FEA (Finite Element Analysis) thermal & structural modeling
- 3-D CAD Design
- New Product Development, from concept to prototype
- Product Testing at our large in-house test lab



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