

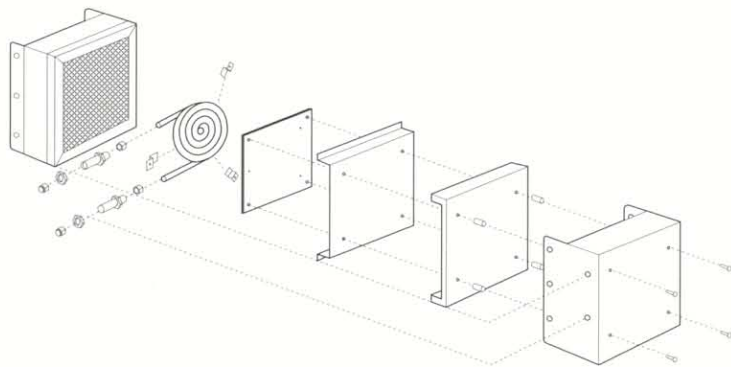
Cata-Dyne™ Instrument Gas Preheater

The Cata-Dyne™ Instrument Gas Preheater has proven ideal for preheating high pressure gas at crucial stepdown areas where temperature loss is very high due to the pressure reduction process.

Typically used in outdoor applications, it prevents freeze-offs at compressor and metering sites where pressures have to be reduced from 1,000 psi (6.895 mPa) or greater, down to final customer distribution pressures of 50 psi (344.35 kPa) or less. These systems are also routinely used for gas preheating for gas chromatographs.

The standard Cata-Dyne™ Instrument Gas Preheater uses a Cata-Dyne™ WX 8 x 8 or 12 x 12 explosion-proof, flameless infrared catalytic gas heater to raise the temperature of gas by an integral coil of 3/8 in. (9.5 mm) diameter by 0.035 in. (0.89 mm) thick stainless steel tubing. The standard stainless steel enclosure is available in both single and dual coil models. The instrument gas supply passes through this coil of tubing and is heated before being used in the operation of such instrumentation as pneumatic controllers, motor valves, pilots, gas chromatographs and other low flow instruments. If a standard unit is not available, CCI Thermal will provide specialty units to meet any project need. (See Project Profile.)

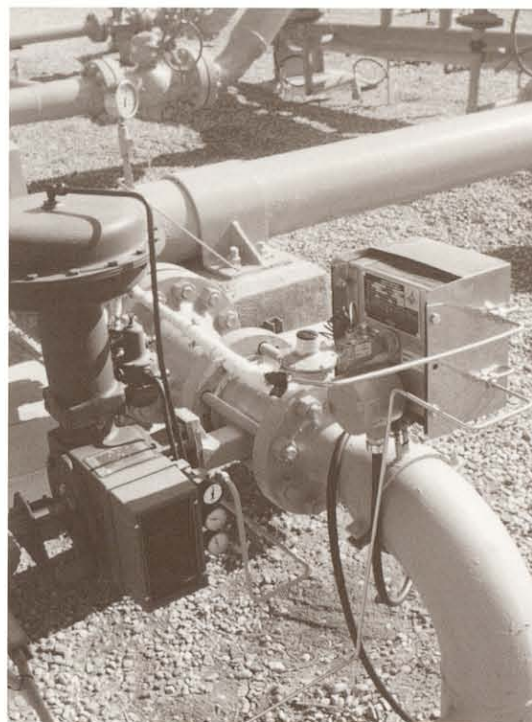
FIGURE 1



The Cata-Dyne™ Instrument Gas Preheaters are available for either natural gas or propane fuel and can be supplied with 12 V DC or 120 V AC starting elements. Once started, these dependable units will continue to supply preheated instrument gas with little or no maintenance.

TABLE 5 Preheater

Heater Quantity & Size	Preheaters & Component
1 - 8 x 8	Instrument Gas Preheater, Single Pass, Coil
1 - 12 x 12	Instrument Gas Preheater, Single Pass, Coil
1 - 8 x 8	Instrument Gas Preheater, Double Pass
1 - 12 x 12	Instrument Gas Preheater, Double Pass



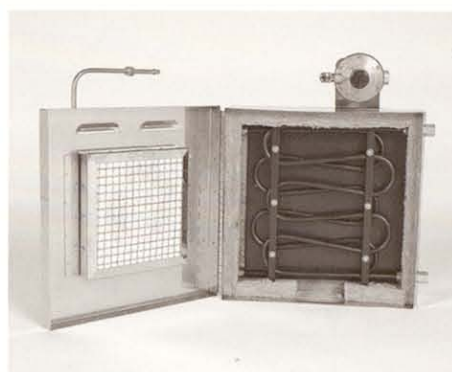
Project Profile

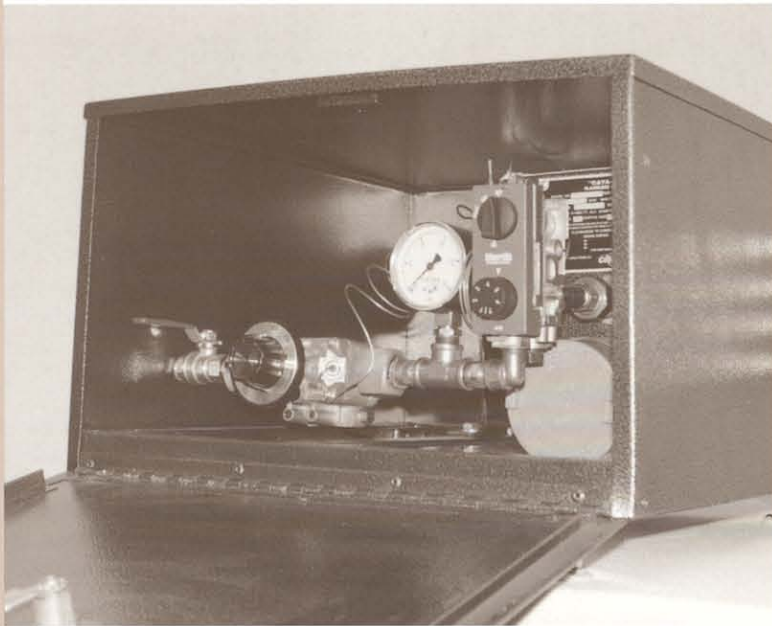
Cata-Dyne™ Instrument Gas Preheater Provides Ideal Solution

A leading gas transmission facility needed a safe and efficient means of preheating gas before distribution, and found the Cata-Dyne™ Instrument Gas Preheater to be the ideal solution.

Typically, when high pressure gas goes through the step down process, temperature drops occur causing the device to freeze. The Cata-Dyne™ Instrument Gas Preheater can help prevent this. Before the gas pressure is reduced, it passes through the gas tubing in front of the face of the Cata-Dyne™ heater, which warms up the gas. This prevents the regulators used in the gas reduction process from freeze-offs.

Not only is the Cata-Dyne™ system highly effective in preheating the gas, this compact sealed unit also eliminates the need for a separate facility to keep the gas at optimum temperatures.





Cata-Dyne™ Super Conductor

The compact Cata-Dyne™ Super Conductor is used by leading utility companies as their primary heat source to maintain instrumentation at operable temperatures during cold weather.

Utilizing innovative heat transfer technology, radiant heat from the conducting heat pipes maintains a moisture-free heating environment in an insulated instrument or meter enclosure. Easily portable, this system is ideal for use in remote locations such as unattended Arctic metering stations.

Some of the Advantages of the Cata-Dyne™ Super Conductor Include:

- Maintains a moisture-free environment
- Heating capacity from 1,000 Btu/hr - 4,000 Btu/hr (0.293 kW - 1.171 kW)
- Keeps instrumentation at an operable temperature to -40°C (-40°F)
- Operates for extended periods of time without maintenance
- Uses natural gas or propane
- Electric power is not required to maintain operation once started
- Compact and easily portable
- Ideal for use in remote unattended locations
- Heater starts from 12 V truck battery
- Custom sizes and designs available

Project Profile

Gas Transmission/Utility Companies Rely on Cata-Dyne™ Super Conductor

A number of major utility companies and gas transmission facilities throughout North America rely on the Cata-Dyne™ Super Conductor to keep their instrumentation enclosures at operable temperatures.

CCI Thermal's compact Super Conductor provides dry penetrating heat for small enclosures that house batteries, radio controls and other moisture-sensitive equipment. This dependable unit helps keep delicate instruments at optimum temperatures.

The Cata-Dyne™ Super Conductor has been proven in the field for the past five years, with more than 20 units in operation for this type of application.

