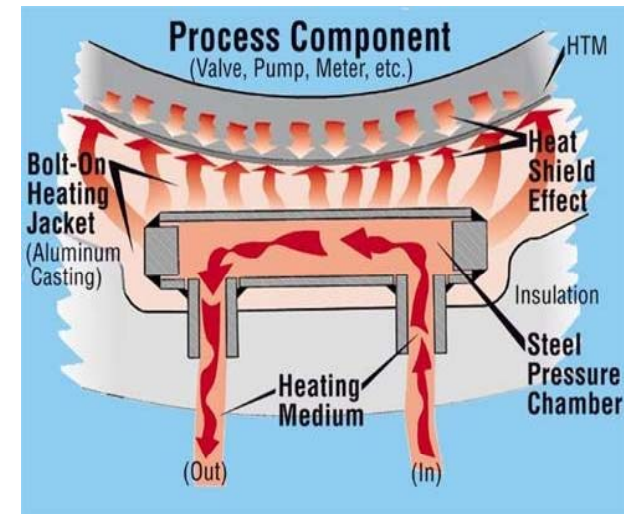
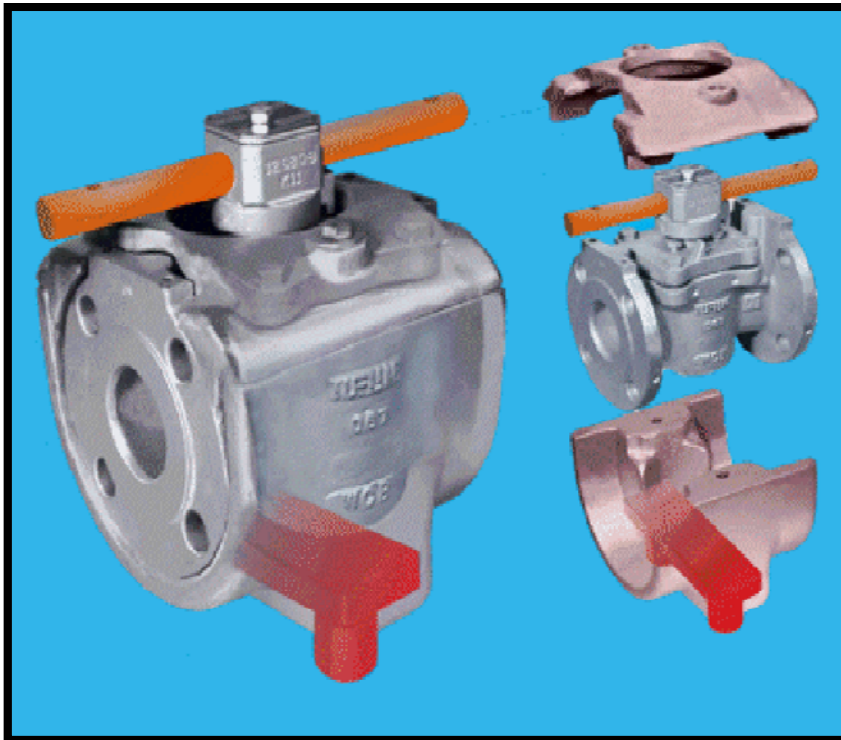
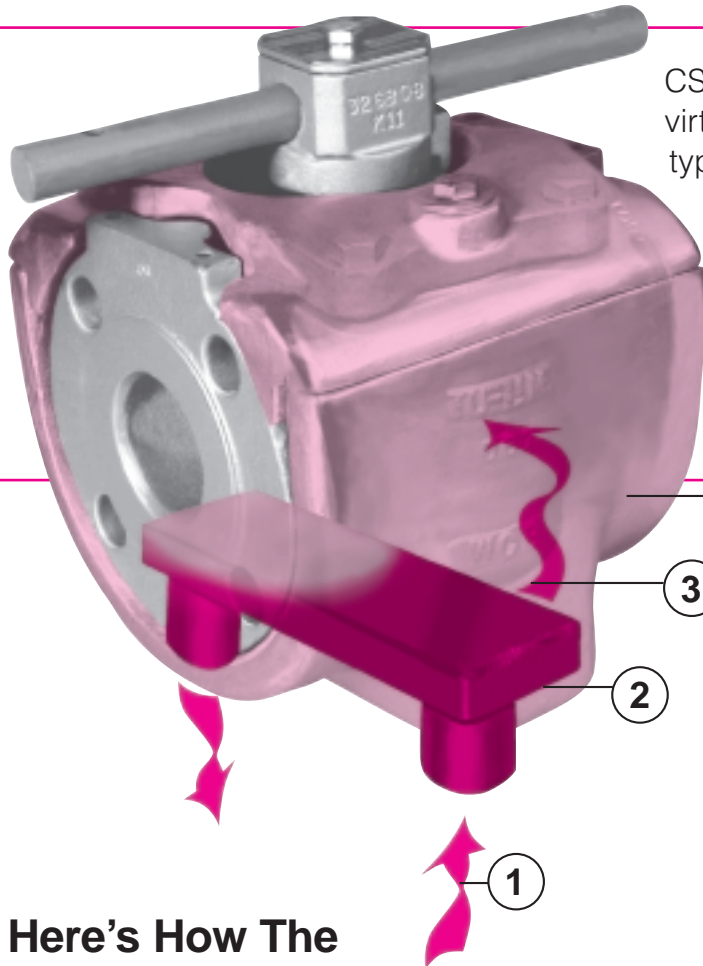


バルブについてはジェットバルブに変わるコントロートを開発致しました。使用バルブに合わせたアルミ製加熱を取り付け、加熱媒体にスチームを流し込み温度保持を致します。

How ControHeat Works



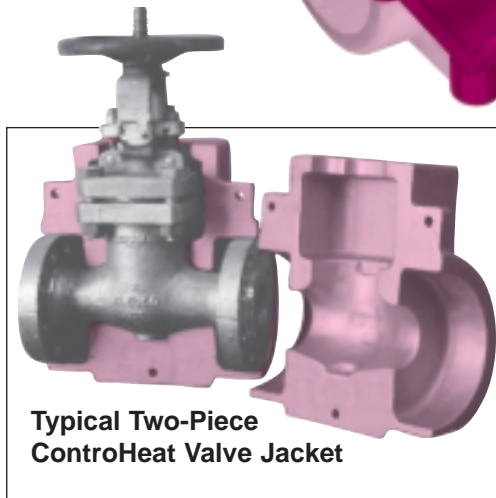
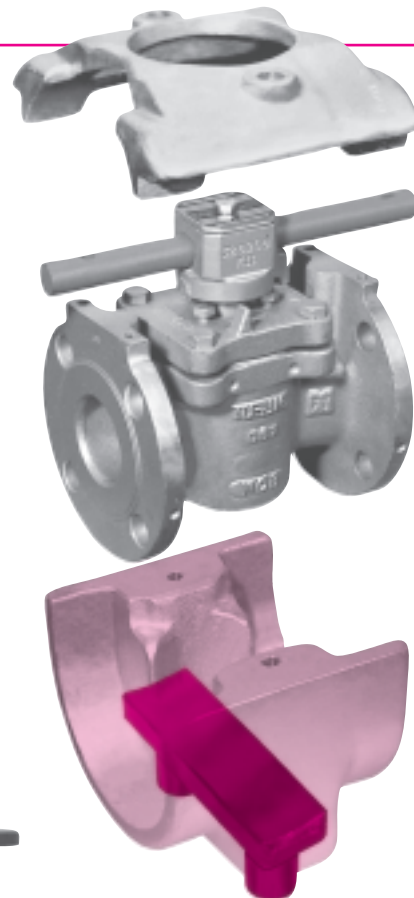
ControHeat Jackets Cover Valves



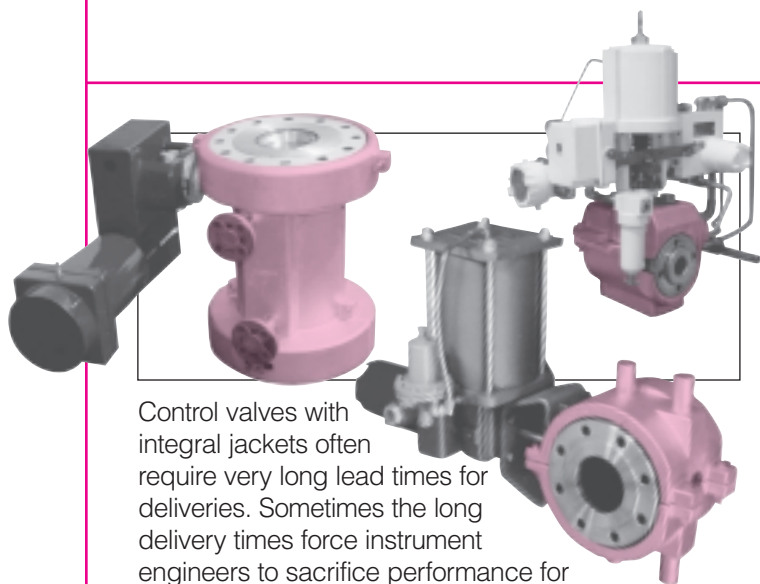
CSI makes ControHeat Bolt-On Jackets for virtually any valve. Generally, there are two types of jacket construction offered: One-piece jackets, called UniJackets, for valves sizes 3-inch and smaller; and two-piece jackets for valves sizes 4-inch and larger. Very large valves like 20-inch gate valves may utilize more than two pieces to accommodate ease of installation.

Here's How The ControHeat Jacket Works:

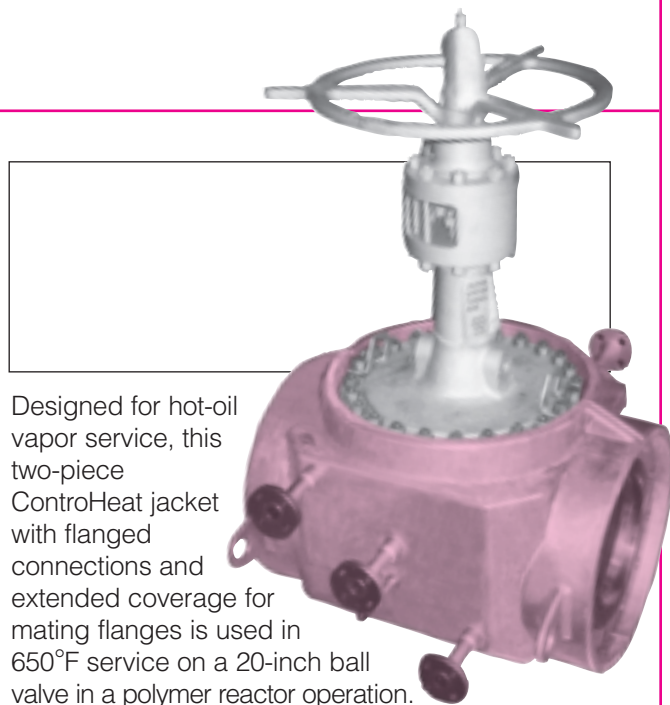
1. Pressurized heating fluid enters the pressure chamber embedded in the aluminum casting. The pressure chamber may be either carbon steel or stainless steel.
2. The pressure chamber is designed, manufactured and tested in accordance with the ASME Boiler and Pressure Vessel Code, Sec. VIII, Div. 1.
3. The aluminum casting, which never contacts the pressurized heating fluid, rapidly transfers heat from the pressure chamber to the external surface of the valve.
4. Normally, heat transfer cement is used with the jacket to minimize any air gap between the casting and the valve body. The cement promotes efficient heat transfer.



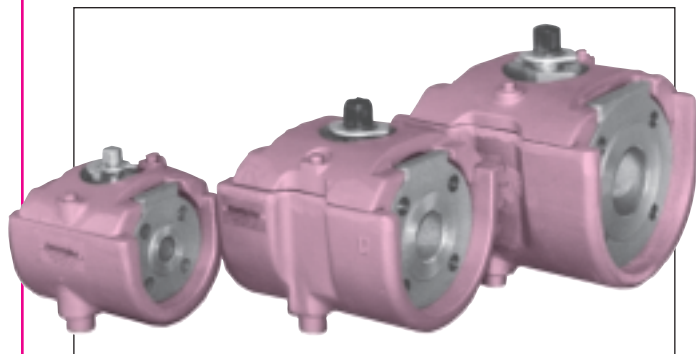
**Typical Two-Piece
ControHeat Valve Jacket**



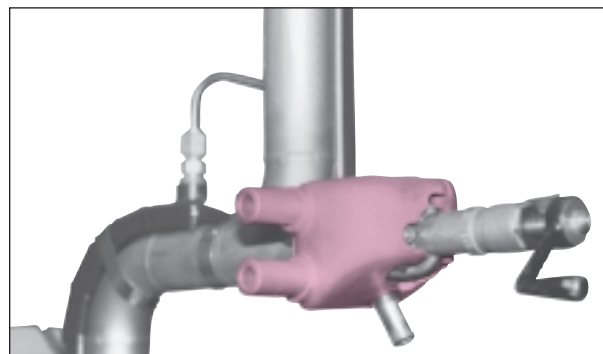
Control valves with integral jackets often require very long lead times for deliveries. Sometimes the long delivery times force instrument engineers to sacrifice performance for availability. ControHeat Jackets allow you to select the optimum valve for the process without concern for the jacket.



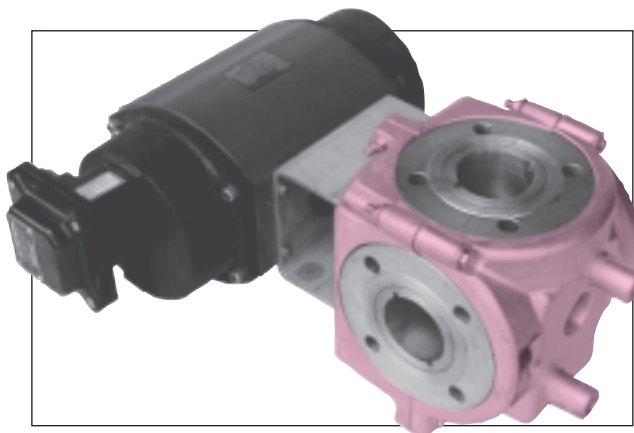
Designed for hot-oil vapor service, this two-piece ControHeat jacket with flanged connections and extended coverage for mating flanges is used in 650°F service on a 20-inch ball valve in a polymer reactor operation.



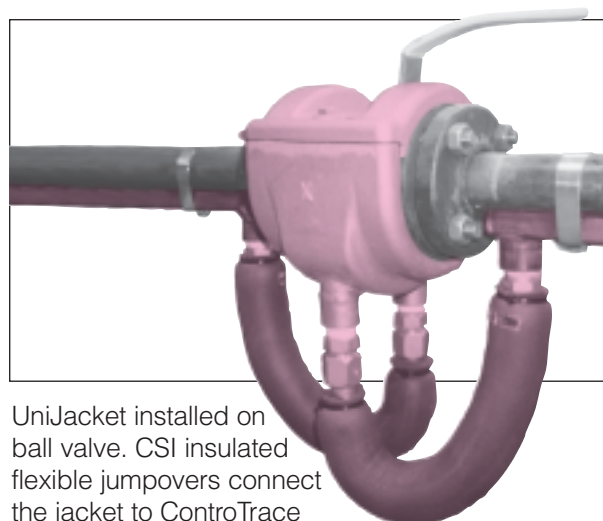
Any ControHeat Valve Jacket can be designed to heat mating pipe flanges as shown on these plug valve jackets used in BPA service.



This UniJacket on an off-the-shelf sampling valve keeps the valve plug-free, ready to operate at all times.



Three-way ball valves are easily heated with ControHeat Jackets. Various styles of actuator brackets can be accommodated.

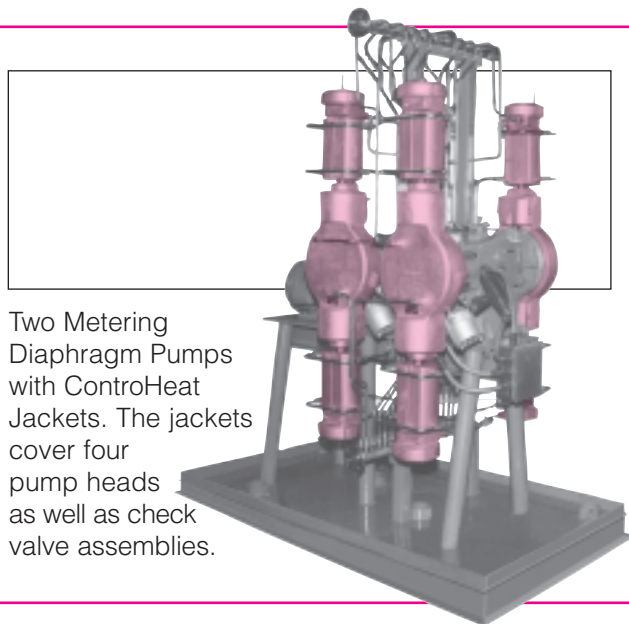
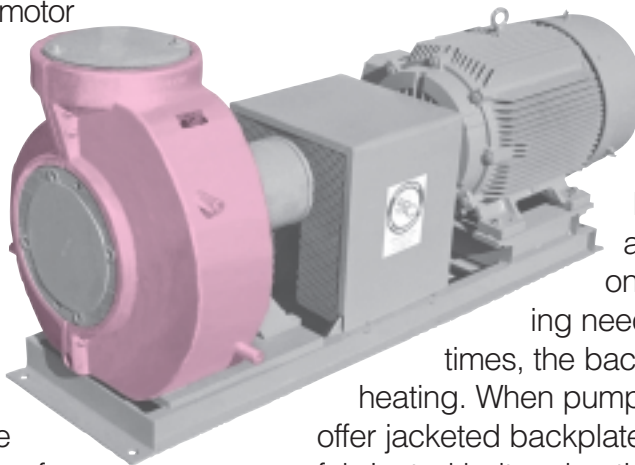


UniJacket installed on ball valve. CSI insulated flexible jumpovers connect the jacket to ControTrace Elements heating adjacent piping.

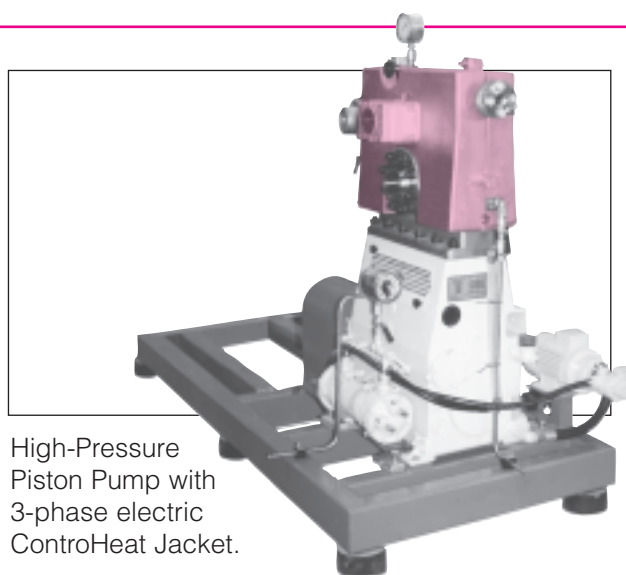
ControHeat Jackets for Pumps

ControHeat Bolt-On Jackets are widely used throughout the processing industry to improve pump efficiencies, prevent motor burnout and promote uniform processing temperatures. Some critical metering pump applications require jacketing to assure accurate throughput. Certain gear pump applications require jacketing to minimize degradation of polymers and other products that are shear sensitive. The barrels of progressive cavity pumps may need to be

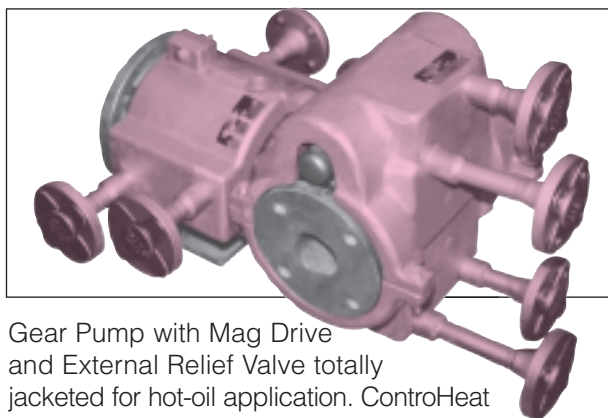
heated for foodstuffs such as chocolate, syrups and dairy products. In some batch-type operations, pump jacketing may be needed during start-up only. In pumping applications like sulfur, phthalic anhydride, or DMT, not only does the pump casing need to be heated at all times, the backplate also may need heating. When pump manufacturers do not offer jacketed backplates, CSI offers both fabricated bolt-on heating jackets as well as ControHeat Jackets.



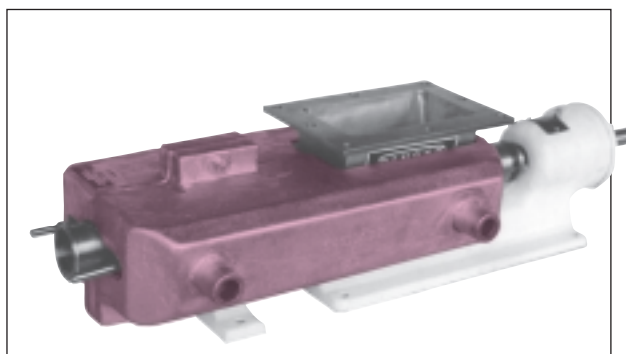
Two Metering Diaphragm Pumps with ControHeat Jackets. The jackets cover four pump heads as well as check valve assemblies.



High-Pressure Piston Pump with 3-phase electric ControHeat Jacket.



Gear Pump with Mag Drive and External Relief Valve totally jacketed for hot-oil application. ControHeat Jacket on mag drive used for heating.

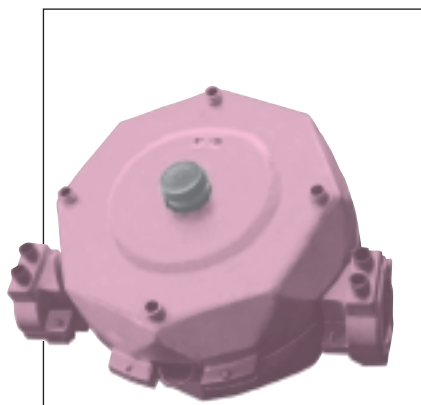
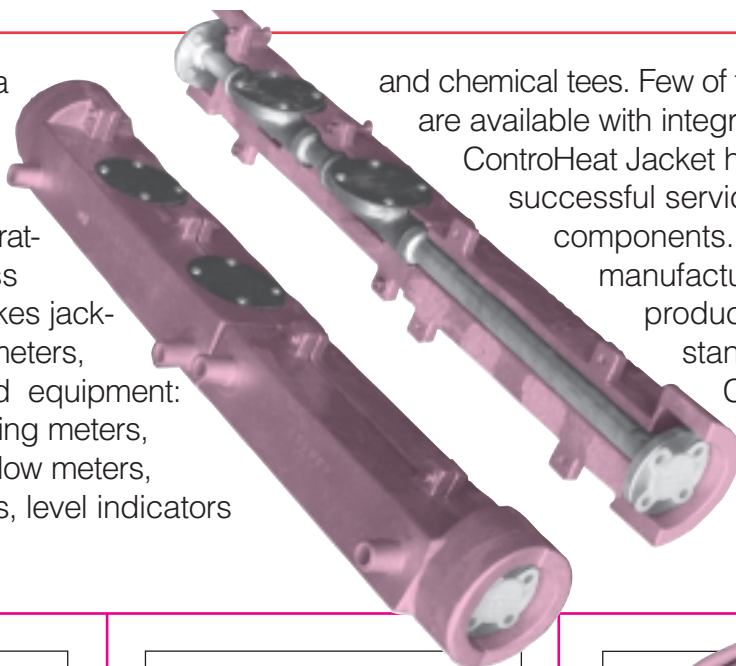


Progressive Cavity Pump for use in CIP service for foodstuffs.

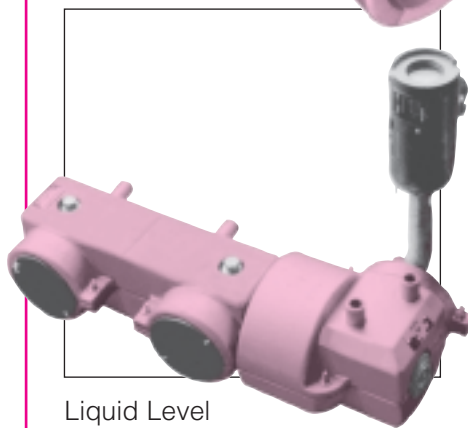
ControHeat Jackets for Meters & Instruments

Accurate process data and process performance often depend on instruments, meters and safety devices operating at elevated process temperatures. CSI makes jackets for many types of meters, instruments and related equipment: DP cells, vortex shedding meters, rupture discs, coriolis flow meters, viscometers, tank vents, level indicators

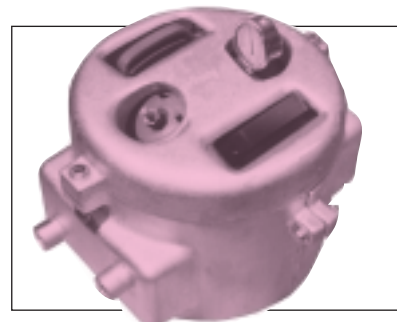
and chemical tees. Few of these components are available with integral jackets. The ControHeat Jacket has a history of successful service with these components. In fact, several manufacturers of these products have standardized on the ControHeat Jacket to complement their product lines.



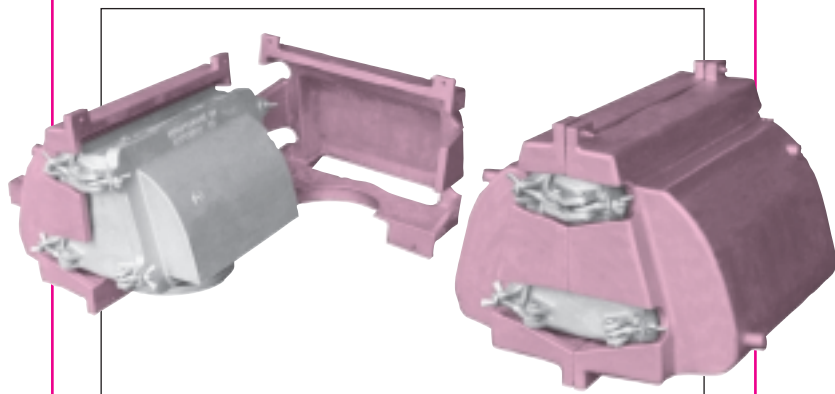
Coriolis Meter used in high temperature service of pre-polymer process. Jacket is hot-oil heated and maintains meter at 600° F.



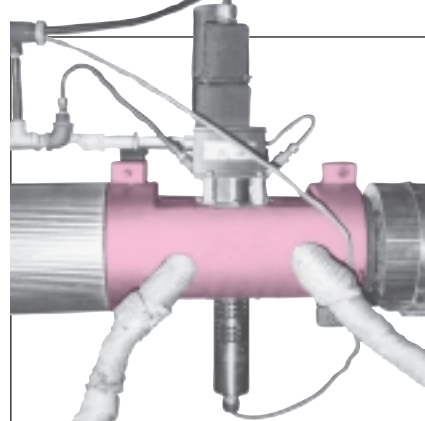
Liquid Level Indicator used in palm oil storage application. Jacket completely covers all process-wetted surfaces.



Pulsation Dampeners with ControHeat Jackets in high-temperature applications provide critical service for downstream instruments and meters. The jacket keeps the stagnant process fluid under the damper's gas pad molten.



Condensables in gas streams can collect and choke the flow in flame arrestor passages. ControHeat Jackets keep the passages clear.



ControHeat Jacket on a Brookfield Viscometer increases the instrument's operating range and longevity, as well as improving accuracy of data collected.