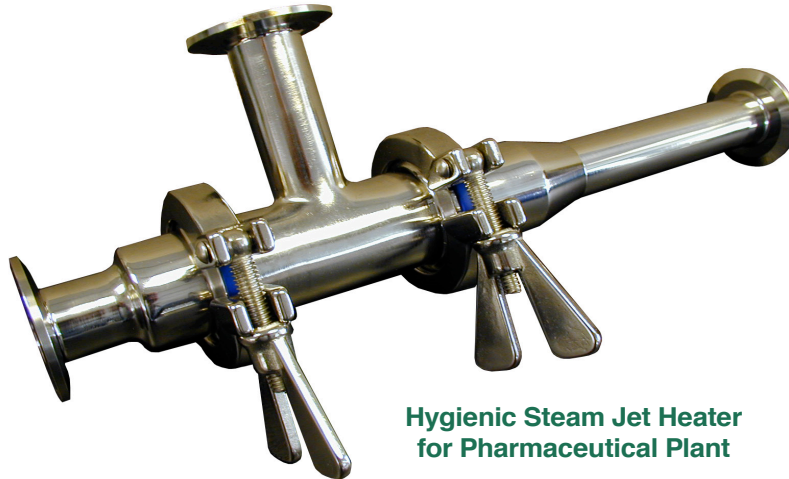


## Hygienic Steam Jet Heaters

With the advent of hygienic steam boilers, Transvac has developed a range of hygienic Steam Jet Heaters for silent direct contact heating of liquids for the food and pharmaceutical industries.



**Hygienic Steam Jet Heater  
for Pharmaceutical Plant**

Known as Instantaneous Jet Heaters, these pipework mounted units use hygienic steam in direct contact with the liquid to be heated, for either process or CIP applications.

By bringing the steam into direct contact with the cold liquid both the sensible and latent heat of the steam is fully dissipated within the liquid, making the Heaters very efficient.

Transvac Jet Heaters are designed to perform this operation silently to prevent undue noise and wear normally associated with steam 'collapse'.

Each Jet Heater is custom designed to suit the process requirements. They can be installed on the liquid pump suction or discharge pipework operating with high or low pressure steam.

### Advantages

- Low cost
- 100 % Efficient
- Compact & simple to install
- Surface finish to suit process
- Silent in operation
- Minimal maintenance
- Custom designed
- Connections to suit plant standard
- Easy to control
- No flameproofing required

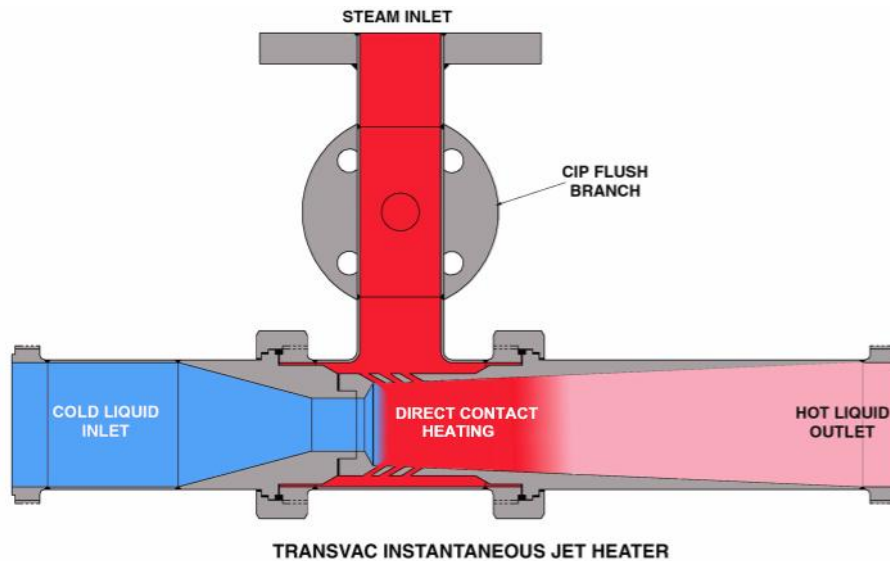
### Typical Applications

- CIP water heating
- Heating food products
- Vegetable blanching
- Concentrated milk heating



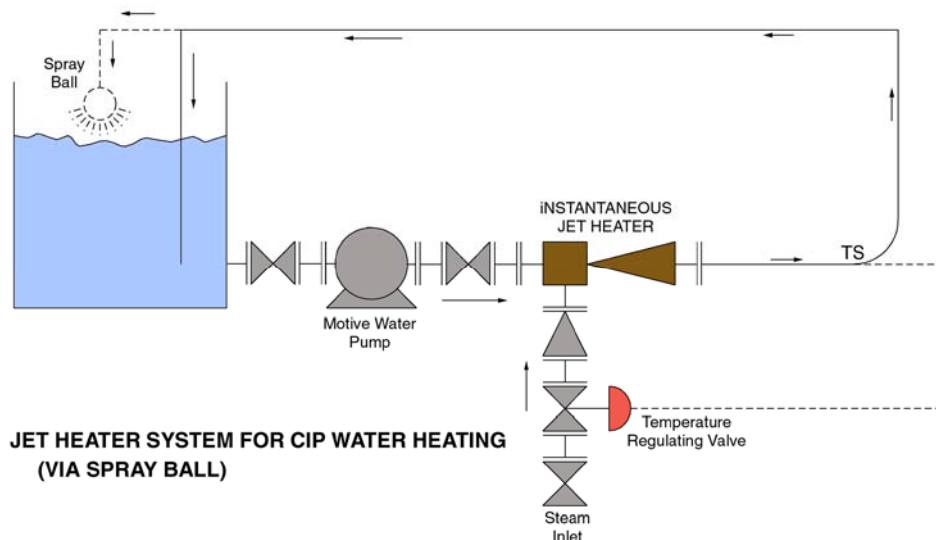
**Silent water heater for a food plant**

## Hygienic Steam Jet Heaters



### Principle of Operation

Pressurised cold liquid is introduced to the Heater and is immediately accelerated through the combining nozzle, resulting in a local pressure drop. Pressurised steam enters the unit and is discharged into the liquid at high velocity via a number of jets around the combining tube. This method of combining steam and liquor prevents 'backing up' should the steam be under a much higher pressure than the liquid. The two streams combine and mix intimately fully condensing the steam silently and instantaneously.



### Construction

Standard materials of construction are 316L stainless steel. All welds are ground smooth and polished to a sateen or specified finish. Designs comply with the latest European standards and units are CE marked where applicable. Liquid connections are typically Tri-clamp, RJT, IDF or ISS. Steam connections are usually flanged with a flush connection sometimes incorporated.