

IMPROVING
EFFICIENCY *and* PRODUCTIVITY
while LOWERING PRODUCTION COSTS



through
EFFICIENT HEATING *of* LIQUIDS
and SLURRIES *for*
CHEMICAL PROCESSING,
PHARMACEUTICAL MANUFACTURING

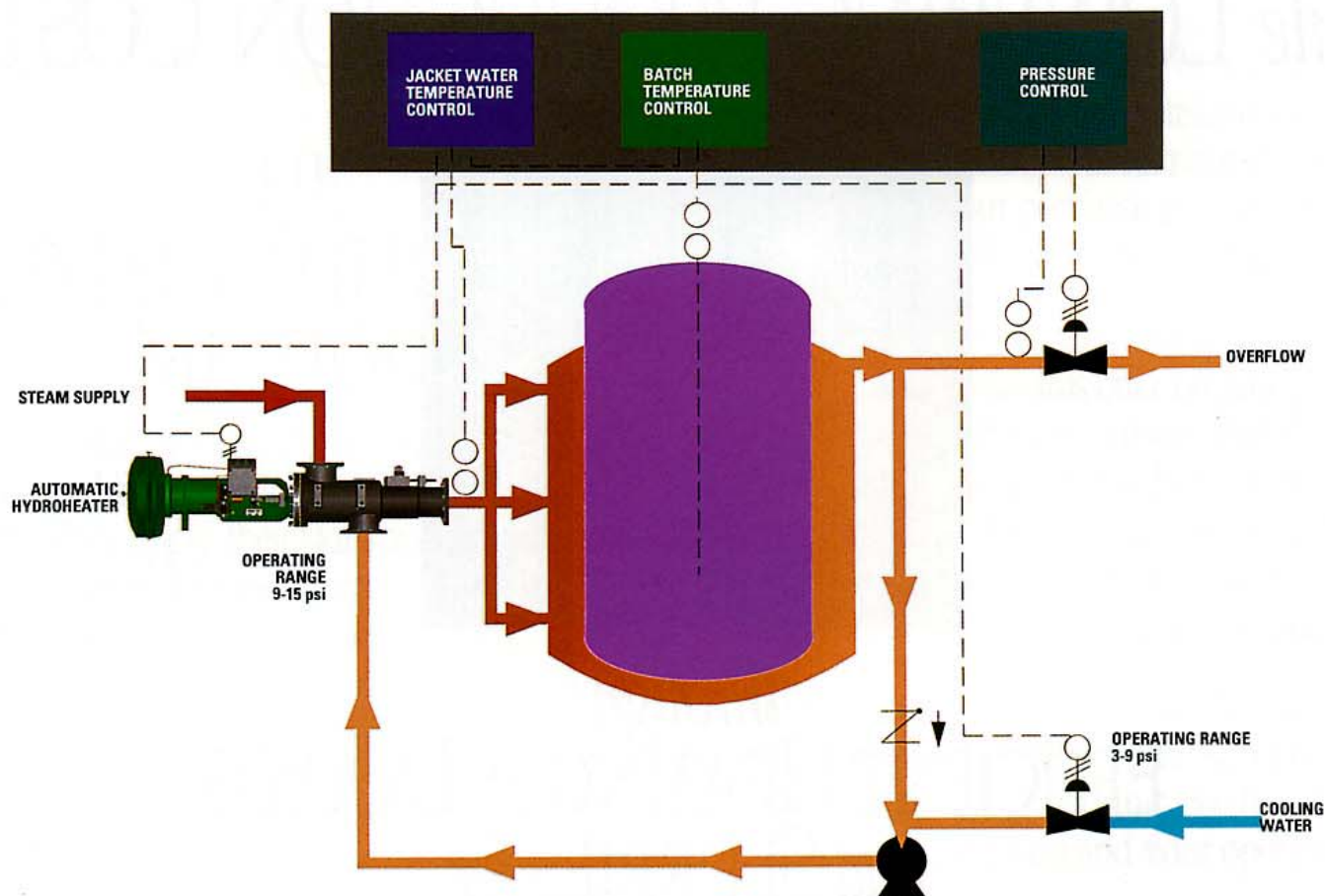
hydro 
THERMAL®

The Leader in Engineered Liquid Heating Systems

HYDROHEATER®

LOWER YOUR PRODUCTION COSTS and IMPROVE *the* PRODUCTIVITY of YOUR JACKETED VESSELS/REACTORS

PRECISE TEMPERATURE CONTROL of JACKETED VESSELS and REACTORS

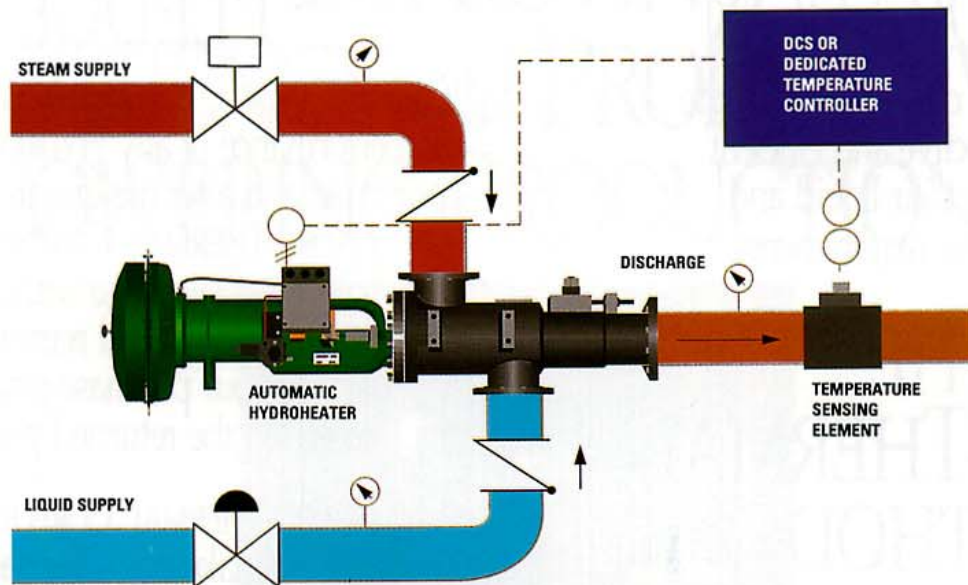


HYDROHEATERS provide the highest degree of temperature control for jacketed vessels/reactors when used as the final temperature control element on the tempered water loop.

When the Hydroheater is installed as illustrated above, you can achieve:

- Faster attainment of set-point.
- Temperature control of circulated water to $\pm 1/2^\circ\text{F}$ ($1/4^\circ\text{C}$).
- Smooth, instantaneous transitions between heating and cooling.
- Precise control of exothermic reactions.
- Reduced potential for thermal shock to expensive glass linings.
- Damage protection for heat sensitive batches.
- Temperatures to 395°F (200°C) (dependent on available steam pressure).

THE HYDROHEATER *can* HELP YOU IMPROVE YOUR PROCESS *in* MANY WAYS



Sterilization of:

- Fermentation Broths
- CIP Systems
- Biological Waste Streams

Heating liquids such as:

- Acids
- Caustics
- Ammonium Persulfate

Heating/cooking slurries such as:

- PVC
- Starch
- Protein
- Alumina Gel

Feed water heating for:

- Deionization Systems
- Reverse Osmosis Systems
- Heat Exchangers
- Roll Mills

Other applications such as

- Filter backwash water heating
- Tank car washing and heating
- Pilot plant applications
- Central hot water systems
- Process water make-up heating
- Ammonia injection into process liquids/slurries

The above list is only a sample of the many applications where HYDROHEATERS are successfully used. We welcome the opportunity to discuss your application or special requirements.

What You'll Gain Using The HYDROHEATER

- Lower operating costs due to reduced maintenance requirements and more efficient energy usage.
- Improved productivity due to reduced down-time for repair and maintenance.
- A higher quality final product due to increased temperature control and uniformity of critical liquids and slurries.

THE GOAL *of* HYDRO-THERMAL CORPORATION

... to provide its customers with the most cost effective and efficient solutions for their liquid and slurry heating requirements.

THE HYDRO-THERMAL METHOD

Each customer's requirements are carefully reviewed by our Applications Engineering Staff. They apply their skills and experience to design heating solutions that are responsive to each customer's performance specifications and satisfy that customer's individual needs.



HYDRO-THERMAL CORPORATION

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**CALL TOLL FREE
800/952-0121**

THE HYDRO-THERMAL PLEDGE

If, for any reason, you are not satisfied with the performance of any HYDROHEATER you purchase; and after making its best effort, HYDRO-THERMAL CORPORATION fails to achieve your satisfaction, HYDRO-THERMAL will reimburse you 100% of your purchase price upon receiving the returned product.

HYDRO-THERMAL CORPORATION is able to make this offer because of our commitment to ensure that the HYDROHEATER you buy has been engineered to meet your performance specifications and that every product we manufacture meets our own stringent quality standards.

We're certain you will be more than satisfied with our people, products and services and we welcome the opportunity to show how they can benefit you and your operation.

For more information on size selection and specifications, contact a Hydro-Thermal Applications Engineer today.