



FLUID PROCESSING MEAT PROCESSING INDUSTRY

ENERGY SAVINGS AND OTHER DIRECT STEAM ADVANTAGES

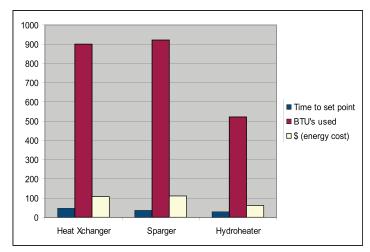
SMART

For over 85 years, smart engineers have used direct contact steam over heat exchangers and spargers to heat liquids and slurries. This proven heating technology has many advantages over other heating methods including energy and time savings, exact temperature control, improved products through-put, optimized product quality and other sustainable needs.

SUSTAINABLE

Energy Efficiency

- 5-30% more energy efficient than heat exchangers or spargers
- Uses 100% of steam's energy
- Recognized by the US Department of Energy (DOE) and multiple state Focus on Energy (FOE) groups, including Wisconsin and California, as an energy savings technology (grants may apply)



Actual Readings - Savings in Time, BTU's used and Dollars

Lower Maintenance and **Production Costs**

- Factory suggested maintenance once per year
- No hammering or subsequent equipment damage
- No condensate return system needed
- Precise temperature control

Invest in Product Quality and Control

- Uniform and instantaneous heat
- Optimized chemical usage for CIP and sanitation



Find your Sustainability Sweet Spot

WHAT IS YOUR FOCUS?

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Food safety, productivity, utility costs and sanitary procedures are just a few concerns facing plant management. Sometimes at odds, parts of these measures can be costly, driving up utility costs and opposing corporate strategies. Using Direct Steam Injection (DSI) in place of heat exchangers or spargers, where appropriate, will help you focus on what is important in your process.

Plant Managers and Engineers

- Avoid USDA compliance shutdowns with precise set-point temperatures
- · Maintenance is no longer a headache
- Increase productivity with more through-put

Corporate Management

- Save utility and energy costs
- Save shutdown costs with accurate set-point temperatures
- Save maintenance costs with a suggested once a year maintenance check-up

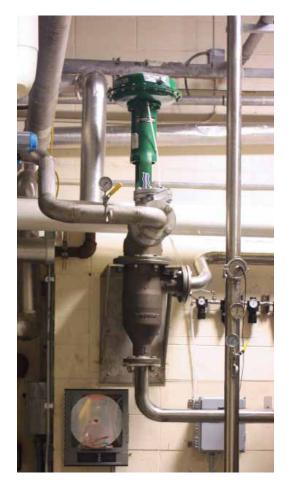
A HYDOHEATER FOR YOUR PROCESS

- Patented stand-alone 3-way valve heater or "plumb-and-go" system
- Fits into process piping and controlled by pneumatic actuators responding to downstream temperature sensors
- Custom made to your operating conditions
- Recommended installation is explained thoroughly

To save time and money, choose systems that have all the controls, recommended piping and configurations. You simply need to plug and plumb it in to begin saving. Our heaters come with a satisfaction warranty and technical help desk services.

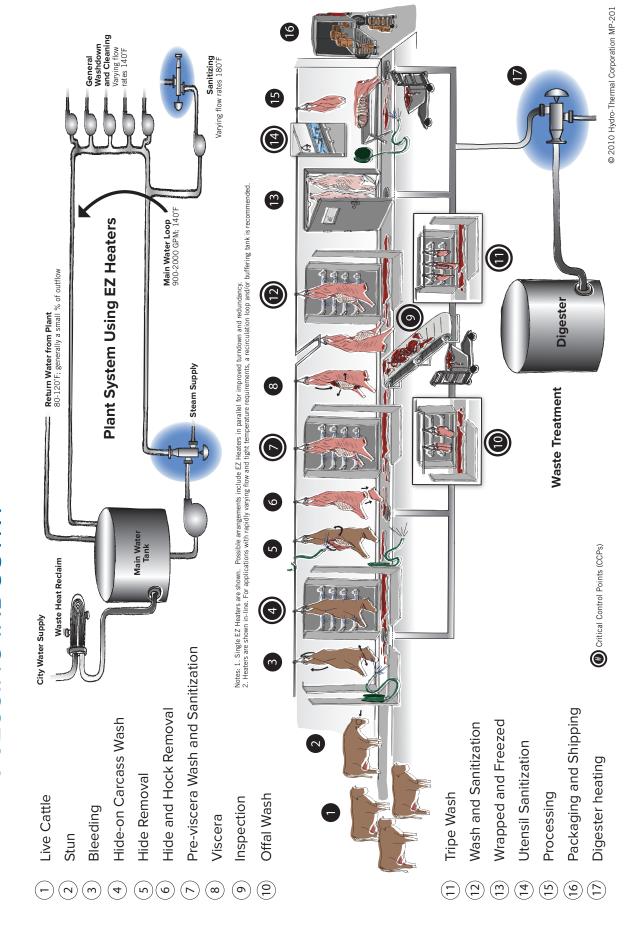
WHEN DO YOU WANT TO START SAVING?

We want to be your SMART ENERGY investment.



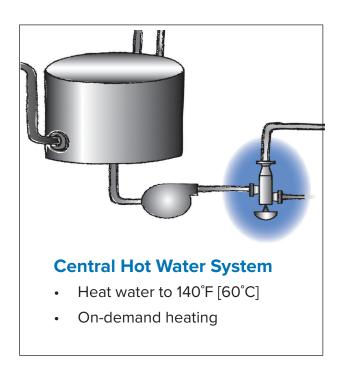


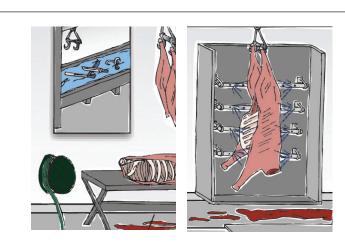
MEAT PROCESSING INDUSTRY



HYDROHEATERS ARE EFFECTIVE IN MANY APPLICATIONS; ESPECIALLY THESE

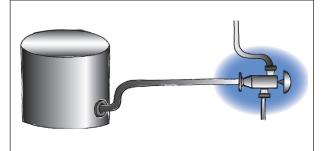
Our talented group of certified engineers understand these processes and can help you explore saving energy, money, time, and maintenance in your plant.





Carcass Wash and Sanitizing Stations

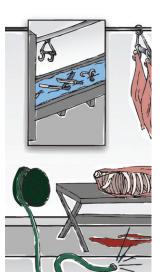
- Precisely meet USDA requirements at 180°F [82°C] or higher
- Hide-on Pre-viscera Post-viscera



Waste System Heating

- Pre-treatment of sludge and organic waste
- Anaerobic digestion





Direct Food Contact Surfaces

- Precisely meet USDA requirements at 180°F [82°C] or higher
- · General washdown
- Process washes
- Hose stations
- Viscera tables and conveyer
- Tallow and blood processing
- Bin washing
- Utensil sanitizing
- Cooking / Rendering

HYDRO-THERMAL PRODUCTS



EZ Skid

- Turn-key systems
- Plumb in water, steam and air
- Simple pre-engineered or made to highly complex specifications



EZ Heater®

- Turn-key systems
- Plumb in water, steam and air
- Simple pre-engineered or made to highly complex specifications



Solaris[®]

- Designed for higher viscosity fluids
- In-line mounting
- Straight-through design
- Up to 25,000 GPM [5,678 m³/h]



Solutions Center and R & D

Hydro-Thermal® maintains a research and development lab in our plant to test our heaters in any process. It is available for customer use as well.

In addition, we are active in many energy savings projects and research on using DSI in many applications.



About Hydro-Thermal Corporation

The leader in DSI for over 85 years, Hydro-Thermal has a strong legacy in the meat processing industry. This knowledge has been successfully leveraged to energy savings and sustainability. Let Hydro-Thermal apply our expertise to your processes.

100% Performance Warranty

If at any time and for any reason, a Hydroheater should fail to perform as designed,* and Hydro-Thermal is given adequate opportunity to provide a remedy, Hydro-Thermal will, after receipt of the unsatisfactory unit, reimburse 100% of the original purchase price.

*Proper replacement of wear parts required