

## BACK SET HEATING

Hydro-Thermal's goal is to look at the ethanol production process and find solutions that make the entire process more efficient and profitable for our customers.

Hydro-Thermal's latest innovation is utilizing the Solaris for back set heating. The Solaris heater is used to heat back set before going into the slurry blender to ensure that the ideal 185°F (85°C) is reached. The Solaris is strategically located between the cook water tank and the slurry blender so that benefits are achieved as the back set enters the slurry blender.

For those who haven't considered heating their back set, there are a lot of advantages. First, you can raise the temperature, which allows for a more uniform temperature of mash throughout the slurry blender/tank. Second, there is a potential for improved energy savings throughout the cooking process. Third, the higher, more uniform temperature throughout the slurry blender and tank allows for potential energy and enzyme savings.

### When used with the Hydro-Thermal slurry tank system, you will achieve:

- > Precise and accurate temperature control
- > Uniform temperature of mash throughout the slurry blender/tank
- > Less steam/energy demand placed on spargers
- > Energy savings

#### Need more information about Hydro-Thermal products?

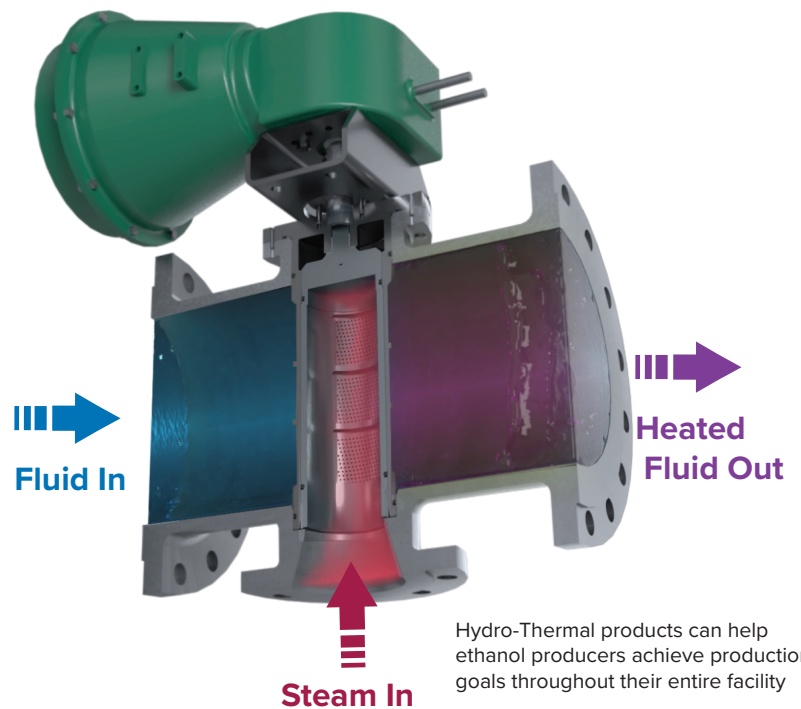
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Plus, other equipment load demand will be reduced while being able to reach precise temperature set points.

Each Solaris is custom designed and built based on the plant's specifications. As part of our design, we utilize a steam leg with a low point drain. We tie into this low point drain, and the plant's steam condensate discharge off the first effect evaps. This allows for any condensate that is generated from our heater to be removed from the process. It is then sent back to the DA tank as part of the boiler makeup supply stream. A dedicated team of steam and industry experts will work through the entire process to ensure that the plant's steam is optimized to perform to the producer's requirements.

Hydro-Thermal Solaris Heater



Hydro-Thermal products can help ethanol producers achieve production goals throughout their entire facility