

THE GRAY LINE

By Technical Systems

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Golden Grain Energy is an alternative energy company that produces 120 million gallons of corn based ethanol each year. For a process that important, your cooling system has to keep things on track. Downtime and lost production is simply unacceptable, and energy efficiency for a 24/7 process is a must. When Golden Grain needed a new chiller to support this critical process, Technical Systems' Gray Line was able to meet the challenge.



The Problem:

Golden Grain had previously purchased a Technical Systems chiller in 2014. That chiller has proven to be reliable and is the heart of their production process. Because cooling is so critical, a second chiller was needed for redundancy. Golden Grain also found that their process creates corrosive fumes that unexpectedly damaged the existing chiller condenser coils. The new chiller must include all the same energy saving and reliable features as the old chiller, plus meet this new challenge of a corrosive environment.

The Solution:

The Technical Systems Gray Line chiller includes a fully integral waterside economizer that provides significant energy savings, yet remains compact and easily fits the available space. Unlike commercial chillers, the TSI chiller was capable of a higher fluid temperature delta. This meant 50% less flow for the same capacity. Pump energy, pipe size, and installation costs were all significantly reduced. The new chillers condenser coils are fully coated with a dipped epoxy polymer coating to protect them from corrosion. With our Gray Line capabilities, Technical Systems was able to easily meet this new challenge and earn the trust of a repeat customer.

Key Takeaways:

- Unlike commercial products, the Gray Line chiller adapted to the unique needs of the environment and process without expensive field changes or modifications.
- Integral free cooling saves significant annual energy costs, providing a positive payback on their investment.
- A low flow, high delta T design reduced the size of pumps, piping, and installation costs.
- Coated condenser coils reduce maintenance costs and increase the chillers lifecycle by resisting corrosion.
- Providing Golden Grains an effective solution earned their trust and created an opportunity for a second project.

"This chiller couldn't possibly work any better."

**-Larry Pascal, Maintenance Manager
Golden Grain Energy, LLC.**



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