



# ALPINE DAIRY

**ALPINE DAIRY IS A LOCAL BRAND THAT CARES ABOUT THE PEOPLE OF MYANMAR. ALPINE DAIRY BELIEVES THAT DRINKING DAIRY AND HAVING AN ACTIVE LIFESTYLE BOTH PLAY ESSENTIAL ROLES TO BETTER HEALTH.**

## PROJECT NAME

Design and Installation of Process Chiller

## SCOPE OF WORK

Air Force One joined forces with Alpine Dairy to design and install an air cooled screw chiller, chilled water pumps, process pumps, piping, storage tank, heat exchanger, bypass and controls.

## CHALLENGE

Adding cooling capacity to the entire plant, and reducing the load on the primary cooling system (ice bank) and improving the reliability and adding some redundancy was a challenge, along with leaving room for future capacity. The client's facility was struggling to provide cooling to the plant in the summers. Ice in the ice banks were depleted by the afternoon, raising the cooling water temperatures and effecting the plants ability to produce their product and having no room for expansion.

## SOLUTION

Air Force One proposed installing 327 tons of process cooling, and removing cooling load from ice banks by diverting a portion of the plants return cooling water to a heat exchanger. The process water was then cooled with 30 degree glycol. Air Force One provided a design template of 34 degree water returning and mixing with the plant return water back to the ice banks at all items. Glycol was used to directly cool the brine water heat exchangers removing another 80 tons from the ice banks.

## RESULT

The plant now has some redundancy with the ice banks not taking on the entire cooling load of the plant, after the first year of constant struggles to identify flow rates and control tweaks. The system has proven over time to be reliable, and an improvement over the demands of the entire plant. Leaving room for extra capacity allowing for future load.

## PROJECT LOCATION

Alpine Dairy  
Wilmot, Ohio 44689

## EQUIPMENT TYPE

327 Tons

## PROJECT TYPE

- Chiller

## PROJECT RELEVANCE

- Design-Build Delivery Method

## PROJECT TEAM

- Air Force One

## PROJECT DATES

Start Date - 3/9/2017  
Completion Date - 12/1/2017

