

A young woman with blonde hair, wearing a dark green tank top and a worn-in baseball cap, stands with her arms crossed in a dairy farm setting. Behind her is a robotic milking system with yellow hoses and metal frames. The background is slightly blurred, showing more of the farm environment.

MUELLER

ROBOTIC MILK COOLING

MILK COOLING SOLUTION FOR <240 COWS

We're committed to improving milk quality, storage, and cooling.

Learn more at [PaulMueller.com](https://www.PaulMueller.com).

THE COOLING SOLUTION FOR YOU

When transitioning to a robotic dairy operation, specialized cooling techniques and equipment are needed to provide optimal milk quality.



THE SYSTEM

For farms with fewer than 240 cows, a single milk cooler and buffer tank system is typically used. Cold milk is pumped into the non-cooled buffer tank during milk pickup and cleaning. Specialized controls coordinate the robots and the cooling system until the milk can be moved into the empty milk cooler.



HOW IT COOLS

During the milk pickup and bulk tank wash period, milk quality is maintained through precooling. Precooling is accomplished with a multi-duty Mueller Accu-Therm® plate cooler. It utilizes both well water and chilled glycol water to transfer heat from milk to cool water as it flows over a series of stainless steel plates. This technique is both fast and energy efficient. Working in unison with a chiller, the Accu-Therm plate cooler instantly cools milk in the transfer line as it exits the robotic milking stalls.



MAKING THE TRANSFER

The milk cooler becomes available to receive milk when the wash is complete. Precooled raw milk then moves from the buffer tank to the milk cooler. The HiPerForm® *plus* control equipped with the robotic I/O expansion kit automates this process for consistency, while the milk cooler maintains optimal cool milk temperatures.



THE FUTURE

This simple but effective system not only provides cooling for today's robotic farm but creates a strong foundation for future growth.





A DIGITAL E-STAR® HIPERFORM® WITH EVC AND MILKSECURE™ TECHNOLOGY

The digital E-Star HiPerForm condensing unit with electronic valve control and MilkSecure™ technology is designed to handle robotic milking dairies' constant cooling needs by providing a consistent, efficient cooling environment.

B MODEL D FRE-HEATER®

The most sustainable heat recovery system in the dairy industry, our Fre-Heater captures the milk cooling system's excess heat energy, reduces waste, and provides additional hot water storage.

C MODEL OH MILK COOLER

As the backbone of the robotic milking farm, a Mueller® milk cooling system safely stores the highest quality raw milk in tank sizes ranging from 500 to 8,000 gallons.

D HIPERFORM PLUS COOLING AND WASH CONTROL

The HiPerForm *plus* cooling and wash control with MilkSecure™ technology built inside works with a cloud-based interface to report the status of milk cooling systems to dairy producers, including milk volume, milk temperatures, equipment alerts, and more.

E HIPERCHILL™ 5 PACKAGE CHILLER

The HiPerChill 5 package chiller cools the milk before it enters the bulk tank. It works in unison with an Accu-Therm plate cooler to improve the milk profile by keeping bacteria, fatty acids, and excessive milk cooler agitation at bay.

F ACCU-THERM PLATE COOLER

With an Accu-Therm plate cooler, use the existing water supply to precool warm milk before it travels to the milk cooler.

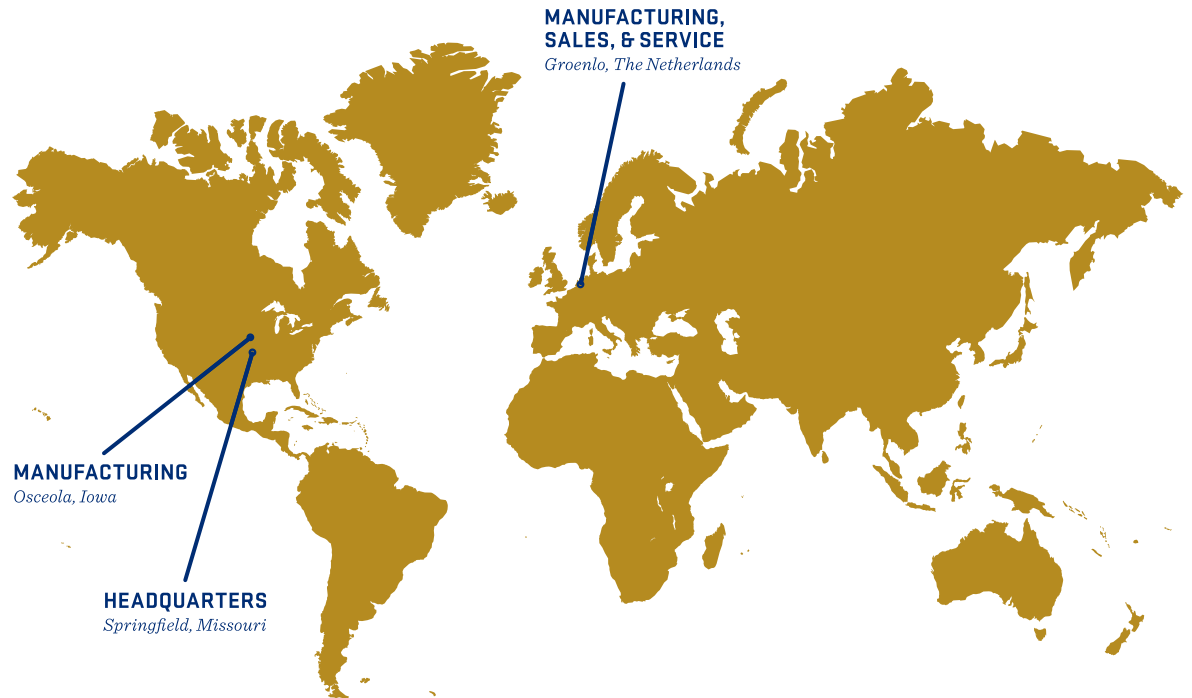


PAUL MUELLER COMPANY



Paul Mueller, Our Founder

At Paul Mueller Company, we are united by a belief that the only quality that matters is quality that works for life. With every piece of processing equipment we build, our goal is to have lasting impact. This collective vision has led us from a small sheet metal shop to a global supplier of heating, cooling, processing, and storage solutions. Our equipment allows farmers, brewers, and engineers to keep their products fresh and their inventory strong. Whether our equipment preserves milk in rural areas or helps manufacture medicine with broad health benefits, we are making an impact across the globe.



Cooling the World's Milk

The commitment and prosperity of local dairy farmers lays a foundation for strong communities around the globe.

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