

HANSEN

CASE STORIES

THE CHALLENGE:

Jack Gage of JRG Refrigeration manages a new ice cream production factory and cold storage warehouse for Casper's Ice Cream in Richmond, Utah. In order to maintain its quality, ice cream requires storage at a temperature of -20°F. This application also requires a consistent liquid feed into vessels that meter the flow from high to low pressure and keep the pressure steady. If the valve opens too quickly, it's difficult to regulate the flow of liquid and maintain steady pressure. To ensure consistency, Jack needed a solution that enables the level in a given vessel to be customized and maintained with precision. Jack contacted Hansen regarding the newly designed Hansen Motorized Control Valve (MCV) and selected a pair of Hansen's MCVs for the ice cream factory and warehouse.

SOLUTION:

The Hansen MCV Motorized Control Valves are perfect for this type of application because of their ability to modulate flow. Combined with the right controls, motorized valves can match their feed rate to the consumption rate of the system providing a constant and even feed rate to the vessels. Having a steady feed rate helps the overall suction pressure stability which has a positive effect on the stability of the delivered product and system efficiency.

RESULTS:

The MCV valves provide the level control Jack needed. To verify his findings, he pulled data from the control system and compared performance before and after the new MCV installations. The old system had an average swing in the vessel levels of 3-3.5%. On the new valves Jack saw an average swing of 2-2.5% in the vessel levels.

ON WORKING WITH HANSEN:

"All of Hansen's folks are great to work with. Hansen has been a preferred manufacturer for us for many years. They have reliable products that we can count on for the long term."



ENGINEER

Jack Gage – Owner, JRG Refrigeration

FACILITY

Casper's Ice Cream Factory and Cold Storage Warehouse

CHALLENGE

A consistent liquid feed is required into vessels to keep pressure steady. If the valve opens too quickly, it's difficult to regulate the flow of the liquid.

SOLUTION

The Hansen MCV Motorized Control Valves with reduced V-port allows gradual and controlled liquid feed metering resulting in more steady liquid feeds with lower swing levels.

- **Additional benefit:** Integrated display that's easy to use and see.

TECHNICAL SPECS

Two Hansen Motorized Control valves having reduced capacity V-ports (Type MCR). Liquid make-up arrangement from the high pressure receiver-to-intercooler vessel and intercooler vessel-to-pump recirculator vessel. Both valves have special reduced capacity V-ports.

DETAILS

Application #1: Liquid make-up to intercooler
 Refrigeration Load: 350 tons (1230 kW)
 Liquid Supply: +85°F (29°C)
 Suction Temp: +20°F (-7°C)

Application #2: Liquid make-up to pump recirculator
 Refrigeration Load: 100 tons (350 kW)
 Liquid Supply: +20°F (-7°C)
 Suction Temp: -30°F (-34°C)

