

HANSEN

CASE STORIES

THE CHALLENGE

John Gay, Lake Ontario Fruit Co.'s plant engineer, needed a way to make sure the company's inventory was protected during ripening intervals and through the critical harvest period. His main goal was to eliminate any mechanical problems and improve temperature control.

\$500K IN INVENTORY

Apples require absolute reliability. Any variation or refrigeration failure can wipe out the work of an entire season. The net worth of just one 60 x 60 foot (18 x 18 meters) storage room at Lake Ontario Fruit Co. is typically \$300 to \$500 thousand. The company installed the Hansen MCV on the advice of its contractor in three of its ripening rooms.

"Our contractor said he liked the control and reliability of Hansen's new valve, so we decided to go with the new MCV. We're using it for our most sensitive apple varieties right now, but we're looking at upgrading all of our older rooms with this new design as soon as we can."

0.1F CONTROL RANGE

Temperature and atmosphere control make up the foundation of an apple storage and processing facility. Refrigeration is the essential first part of that equation, working to regulate ripening and minimize it as much as possible. At Lake Ontario Fruit Co. – where the ripening needs of most apple varieties demand that temperature vary only a tenth of a degree Fahrenheit (0.05C) – specificity and reliability are the most important factors.

"There's an absolute difference in quality in having fine control for apples. That's why we chose these controls. The valves can make very fine adjustments in response to the control."

ENGINEER

John Gay – Lake Ontario Fruit Co.

TECHNICAL SPECS

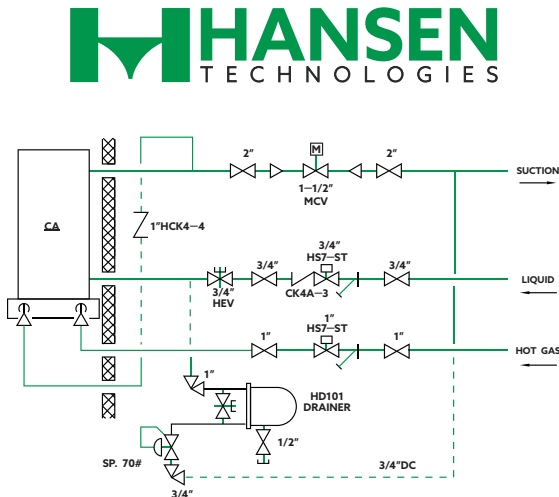
1-1/2" (40mm) Port Size, MCV40 Motorized Control Valve

DETAILS

Suction Control Valve Refrigeration
 Load: 22.6 tons (80 kW)
 Suction Temp: 22F (-5.5C)
 Room Temperature: 32F to 38F (0 to 3.3C) depending on apple variety
 Liquid Supply: 70 psi (4.8 bar), sub-cooled to 22F (-5.5C)
 Operating suction pressure: 30 psi (2.1 bar)

FACILITY

Three 60-foot by 60-foot (18 x 18 meters) apple ripening rooms (out of 18 total)



HANSEN'S MCV HAS A BETTER DESIGN AND TIGHTER CONTROL, THAT'S WHY WE USE AND TRUST THIS VALVE.

- John Gay
 Lake Ontario Fruit Co.

24/7/365 PERFORMANCE

Rugged performance is important in any harvest operation. A mid-season valve failure is an unacceptable infrastructure problem, so the factors that could cause such a failure must be non-issues. The company chose the Hansen MCV on its reputation for rugged reliability and its ability to perform to extreme temperatures.

"We need continuity in this business. During the critical first four or five weeks of a harvest we cannot have a failure and maintenance, so these valves need to be rugged. When it's time to perform, they just work."

NEW LEVELS OF AUTOMATION

New advances in automation now allow fine temperature and pressure control. With Hansen's MCV, Lake Ontario Fruit Co. could make smaller, automated adjustments resulting in a 50% improvement in temperature control range. The new valve design also moved Ontario Fruit to the next level in advanced control and communication between the valve and automated control system.

CHALLENGE

Introduce precision refrigeration, improve control and ensure reliability, eliminate any possible mechanical problems

SOLUTION

John installed Hansen's new MCV in three of his most temperature-sensitive ripening rooms. Improvements noted in these key areas:

- **Rugged reliability:** the MCV performed to a variety of extreme conditions, earning it a place in the company's plan to upgrade the remaining 15 specialty ripening rooms
- **Precision:** tighter control and responsiveness, efficiency increase
- **Automation:** finite, auto-controlled temperature adjustment

