



ORGANIC VALLEY KEEPING LOCAL

Customer Background



Problems

- Antiquated vacuum system
- Continuous power usage



Solutions & Benefits

- Vacuum system with automatic loading controls
- Soft starter to conserve power on start up
- Decreased footprint

Organic Valley has become the largest organic dairy cooperative in the nation, but that has not changed their mission to bring people premium local organic dairy products. That is exactly what they have done by buying and renovating the old Farmers Cooperative Creamery in McMinnville, OR.

Renovation of the facility encompassed replacement and upgrades to much of the plant equipment, including the replacement and upgrade of two antiquated vacuum pumps for a duplex liquid ring vacuum system, provided by Rogers Machinery. Paul Silva, Maintenance Manager, worked with Rogers Machinery on the vacuum pump upgrade.



Vacuum is used in the process in order to reduce the temperature at which liquid evaporation takes place. Without vacuum, water boils at 212°F at sea level. Under vacuum generated by the Rogers Vacuum System, however, the evaporation temperature can be substantially reduced. A cold pre-condenser is utilized to reduce the load on the vacuum system, allowing the vacuum pump to be smaller and be required less frequently.

The previous vacuum pumps ran continuously, which meant they used more power. Water flowing through the pumps while they were running meant that the pumps used a large volume of water as well.



The Rogers Vacuum System selected by Organic Valley includes automatic loading controls which selectively operate and sequence the vacuum system pumps on and off based on actual demand, allowing for power and water savings. This system also includes the use of a soft starter to not overuse power when starting up.

In replacing the antiquated equipment with an energy efficient

whole system solution, Organic Valley saves approximately 32,000 kWh and 16,000 gallons of water usage per year while operating their new system relative to the standard practice.

Another benefit of running the machines this way is that the pump in the lead position can be changed so that one pump is not being overused, increasing the useful life of each pump. The new system also has about half the footprint of the previous solution. This is accomplished through creative stacking of the vacuum pumps. In an industrial workspace, every foot counts.

Silva chose to work with Rogers Machinery on the vacuum system project because he had a good experience before, and wanted to work with a company that had a strong local presence. Organic Valley did not want to risk working with a company that did not have the time or resources to keep production moving smoothly. These choices have led to a Rogers Vacuum System solution centered on maximizing productivity while minimizing overall cost of ownership through system efficiency improvements.

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