

## Rising To the Challenge

MOUVEX® C-SERIES ECCENTRIC DISC PUMP CLEANS UP AFTER FAILING PUMP CREATES A MAINTENANCE CHALLENGE FOR A NORTHEASTERN BAKED-GOODS MANUFACTURER

*By David Kirk*



A Northeastern baked-goods manufacturer's facility features a series of production lines for its cookie operations. A C-Series Eccentric Disc Pump from Mouvex® is used to assist in the chocolate-coating process.

A large baked-goods manufacturer located in the Northeastern United States that produces nearly 600 products in its expansive production facility was having trouble with a leaking pump.

The facility has numerous production lines running for its cookie operations alone. The problem pump was being utilized in the critical process that distributes chocolate coating over the cookies. The facility was using a circumferential piston pump that was typically used in these types of applications, but the plant's Maintenance Manager recalls having a problem with this pump from day one.

"We had trouble almost immediately. The pump would run a few weeks and it would develop leaks," the Maintenance Manager said. "We'd tear it apart and clean it up. However, the problem was from the white-chocolate coating accumulating between the seals, basically spreading them apart. That's where the leak was coming from."

Thanks to this problem pump, the manufacturing operation experienced significant product loss. Roughly 100 pounds of white-chocolate coating was being lost every week. Operators would come in each morning to a room full of chocolate all over the floor, and would be

forced to constantly shovel it up due to the leaking seals. The maintenance team worked around the mess as their circumferential piston pump supplier struggled to provide a solution to the problem.

Fortunately for the Maintenance Manager, a meeting with John Jones would change his fortunes. Jones, a representative for distributor ProcessFlo, Easton, PA, was on-site for an unrelated pump application when he learned of the pump problem. He spoke with the Maintenance Manager and immediately thought of another pump that would be more suitable for the application. At that point, the Maintenance Manager was anxious to end his maintenance nightmare and trusted Jones's recommendation.

"We knew that ProcessFlo was a reputable distributor, we had dealt with them for numerous other applications, so I met with John Jones," the Maintenance Manager said. The conversation started with Jones meeting with the maintenance team and the on-site buyer about the problem. The problem was complicated, but Jones knew the solution could be simple.

## An Eccentric Solution

Jones was convinced that an eccentric disc pump from Mouvex®, Auxerre, France, would solve the problem, but convincing the Maintenance Manager and the globally known baked-goods manufacturer to invest in an unknown pumping technology for this application proved to be a challenge. After all, the manufacturer only knew circumferential piston pumps for this type of application. Fortunately for Jones, the Maintenance Manager was familiar with eccentric disc technology from a previous job where he dealt with residential refrigeration.

“Eccentric disc technology is very similar to a scroll compressor, so I was familiar with the technology, but not as it applied to pumping,” the Maintenance Manager said. “As soon as I saw how it worked and the fact there aren’t any moving seals to allow the product to come out, it was obvious to me it was going to work.”

Jones brought in David Kirk and Tom Zuckett from Mouvex, a leading brand from PSG®, Oakbrook Terrace, IL, USA, to demonstrate the C-Series Eccentric Disc Pump for the Maintenance Manager and his team. They shared extensive data and videos with the team to ease any concerns they had about the pump. Specifically, Kirk and Zuckett recommended installing pressure and flow switches to ensure the pump wouldn’t deadhead or run dry.

The team was convinced this was the pump to solve their maintenance headache. The team reconfigured the piping, installed the protective devices and in early 2012 prepared to officially implement the eccentric disc pump into the manufacturing process.

After more than two years of 24/7 operation, the C-Series has been functioning without complaint. In fact, in August 2014, a PSG technician went to the plant to conduct some maintenance training and when the original C-Series pump was taken apart, there were no signs of wear and it was still within the original factory tolerances. The plant operator was so impressed that additional C-Series pumps have now been purchased to replace other problematic pumps and to outfit a new production line.

The C-Series Eccentric Disc Pump can produce this operational excellence because it is designed without mechanical seals, packing or magnets that are prone to leaks or product contamination. The unit is self-priming with strong suction and pressure to clear the lines, which aids in product recovery at the end of production runs or during changeovers, resulting in less waste, higher yields and increased “profit



Eccentric Disc Pumps, such as the new SLS Series (above), from Mouvex are designed without the mechanical seals, packing or magnets that are prone to leaks or contamination.

recovery” for the operator. It features Clean-In-Place (CIP) and Sterilize-in-Place (SIP) capabilities, meaning it can be flushed and cleaned in place without disassembly. The unit has the ability to pump low-and high-viscosity products, while output is not affected by viscosity variation.

## Conclusion

The Maintenance Manager encountered numerous challenges throughout this process, including a messy melt room, a failing pump and justifying spending more money on a pump they had never used at the facility. Despite these complicated challenges, the C-Series Eccentric Disc Pump, which celebrated two years of trouble-free operation in April 2014, has finally given him true peace of mind.

“Dealing with a leaking pump is one extra headache you just don’t need. It’s nice to get the right pump for the right application,” the Maintenance Manager said. “The Mouvex pump is very low maintenance. I would definitely install another eccentric disc pump in the future.”

## About the Author:

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