

Printing Company Saves \$5,680 a Year with New Vacuum Technology

Berman Printing, based in Cincinnati, Ohio is a commercial printer that runs 24-hours, five days a week. They are the largest sheet-fed printer in the tri-state area.

For their Mueller Martini six-pocket saddle stitcher, Berman Printing was using two rotary vane vacuum pumps, which were causing problems and slowing down production.

Although, rotary vane vacuum pumps perform well in many other applications, they were not well suited for this particular application.

With the constant demands of a large printing facility, Berman Printing did not have time for the unscheduled downtime that they were experiencing



The Busch Merlin

with these vacuum pumps. They had to have two back up pumps due to the pumps continually failing. Every time the first two pumps failed, the backup pumps would be swapped in while the first two pumps were sent out for repairs.

"We need consistent volume and a certain level of vacuum. We could not reach it with the rotary vane pumps and we wanted a pump that had a better performance record," said Phil Fox, Bindery Supervisor.

Frequent visits to maintenance shops, a loss in production and high utility costs, gave Berman Printing the incentive to look for a new type of vacuum technology.

Berman Printing completed a cost of



Muller Martini Six-Pocket Saddle Stitcher

ownership analysis, which compared the two existing rotary vane pumps to one Busch Merlin claw-type combination pressure/vacuum pump. The analysis compared the pumps based on plant operation hours, equipment parts, overhaul costs, utility costs and the payback period. The results showed how one Busch Merlin claw-type combination pressure/vacuum pump could replace two rotary vane pumps, yielding significant reductions in energy and maintenance costs.

The cost of ownership analysis revealed that Berman Printing was using almost double the energy at 9.6 kW combined for the two rotary vane pumps, while the Busch Merlin only used 5.5 kW. The non-contacting rotors of the Busch Merlin run friction-free, allowing the use of a smaller motor that consumes less electricity. With the Busch Merlin, they would save approximately \$4,800 a year in annual utility costs and their electric bill decreased with the reduction of its kW hours of operation.

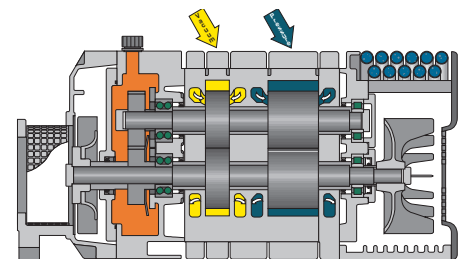
In addition to saving energy costs, Berman Printing is saving an additional \$880 a year because there are no vanes to replace in the Busch Merlin pump. The cost of ownership analysis also reported that their overhaul costs would be significantly lower. The two rotary vane pumps were averaging \$600 a year each to rebuild. In addition, there is virtually no downtime with the Busch Merlin because it

requires no routine preventative maintenance.

The Busch Merlin Series are combination pressure/vacuum claw-type pumps that feature non-contacting, non-wearing internal components. Pressure and vacuum are provided by independent pumping chambers, which are 100 percent oil-free. All Busch Merlin pumps use claw-type rotors instead of vanes for compression.

The Merlin pump is ideal for the printing industry and is especially designed for the needs of sheet feeding equipment. Their rugged construction makes them highly reliable and tolerable to paper dust and offset powder. Two non-contacting claws trap a volume of air at the inlet and convey it to exhaust where it is compressed and discharged.

"It was a pretty seamless changeover with the Busch Merlin. The guy just came in, dropped the pump in and we were up and running. We are now running one pump instead of two. Plus it is more efficient than the first two that we had," said Phil Fox. "We



Merlin Cutaway

are very happy with the Busch Merlin." Berman Printing has future plans to replace more rotary vane oil recirculating pumps with the Busch Merlin rotary dry claw-type combination pressure/vacuum pump.

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