Busch Triplex Vacuum System Replaces 15 Individual Pumps in Bindery Facility

The Banta Publications Group in Greenfield, OH produces short run, special-interest magazines and catalogs. In order to keep up with market demands, they needed to expand their bindery facility.

Banta was using 15 individual rotary vane vacuum pumps on their bindery machinery. Their current vacuum pump situation was anything but ideal with various brands and models that constantly needed upkeep and repair.

"They took a lot of maintenance. They were unpleasant to look at in the bindery, very noisy, put out a lot of heat, blew a lot of dirt around and took up too much floor space. It did not give us the consistent level of vacuum that we needed," said Dan Tatman, Plant Engineer/Maintenance Manager.

With 15 different pumps, the maintenance and engineer staff also had to go through various vendors for all of their service and parts needs.

Due to these reasons, Banta decided to implement a central vacuum system into their bindery facility. They compared several different vacuum systems based on energy savings, less maintenance service hours, back-up redundancy, more consistent vacuum levels, less responsibility for the bindery operators, less heat, dirt and noise in the bindery, more available floor space and its aes-



Monitoring the Busch system



Busch Triplex Central Vacuum System thetic appeal. Banta found a solution to all of these concerns in a Busch triplex central vacuum system.

The Busch triplex central vacuum system offers many advantages over individual pumps. The remote location reduces noise and heat levels near operators. Pumps can be altered to ensure even wear and the number of pumps to maintain is now three instead of 15, thus reducing maintenance and parts costs. It also requires less floor space. Vacuum is stored in the receiver tank for use as needed, which improves overall efficiency and energy conservation.

The Busch triplex central vacuum system is a complete, ready to run automatic alternating lead/lag₁/lag₂ system. One vacuum pump is selected as the lead pump and is expected to meet the majority of the system demand, while the second, or lag₁ pump meets peak demand conditions. The lag₂ pump is usually employed as a back-up pump in the event the lead or lag₁ pump should be out of service, therefore there is no downtime.

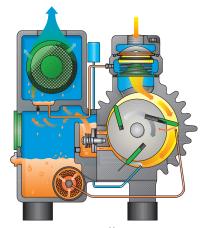
Banta runs all of their bindery equipment using the first pump, with the second pump coming on momentarily if the demand is there. They are using the third pump for back-up and future growth. Banta is saving \$5,200 a year in electrical costs with the Busch vacu-

um system. Banta no longer has the high maintenance costs that they were experiencing with the 15 individual pumps. Banta currently does preventive maintenance on the Busch system to ensure a long pump life.

"We are now able to maintain a better and more consistent vacuum level of 22" Hg with the Busch sys-

tem, than we did with the individual rotary vane pumps," said Dan Tatman.

Another added feature that both the engineers and maintenance staff enjoy is that they can monitor the pressure levels of the Busch system from their desk computer.



R 5 Cutaway Illustration

The Busch triplex central vacuum system has lowered their energy and maintenance costs, while still providing Banta with a consistent vacuum level. For Banta's future growth, they can expand up to three more Busch vacuum pumps with easy-to-install mechanical and electrical expansion modules.

