



Close-Coupled Horizontal Centrifugal Pump for Water Lime Concentration

After frequent, recurring repairs for their frame-mounted pump, a Rhode Island company turned to the Delta Pump Group to suggest a better alternative for pumping water lime concentration

The Problem

A Rhode Island company in the high performance alloy business had a problem with their current pumps. Frequent repairs, lack of space and energy inefficiencies plagued their operations. By nature, their application is a difficult one. The company pumps water lime concentration containing trace nickel, copper and metals.

Water lime concentration is highly acidic, with a pH between 8-9, sometimes as high as 11. The fluid also contains a high percentage of abrasive solids. Both of these fluid characteristics are tough on pumps, especially if those pumps are not well-suited to the application.

At the time, the company was operating with a Polypropylene Vanton frame-mounted pump that took up a large chunk of the factory floor space and could not withstand the harsh properties of the water lime concentration it was handling. The constant wearing on the plastic pump parts caused premature failures, breakdowns and maintenance headaches. The pump and motor for this pump type are also attached by a drive coupling that needs to be realigned quite frequently. Without a better alternative, the company required repairing their frame-mounted pumps at a very high cost.

Finally, the company turned to the Delta Pump Group—a division of Delta Electro Power—for advice.

The Solution

Delta Pump Group is a subsection of Delta Electro Power, a family company that has helped customers find the right motors, pumps, controls and related equipment in the Rhode Island area for more than 35 years.

Eric Novogrodski, Owner/Partner of Pump Group at Delta Electro Power, Inc. was called in to consult and recommend a better option. He knew exactly what pump would fit their needs. “They were struggling, going back to the Vanton pump, Novogrodski says. “We went in and said, you know, a 316 stainless steel close-coupled Price Pump would fit right in there.”

Novogrodski has extensive experience in the fluid-handling industry and recommended that the company install the Price Pump XJ400 close-coupled horizontal centrifugal pump. Because the



pump does not feature a coupling, it does not need to be constantly realigned. The pump is also significantly smaller than the frame-mounted pump. “It was a terrific solution for them,” Novogrodski says. “By replacing their old pump with the Price XJ400, they probably gained 75% of their floor space back.” Working with the customer, the Delta Pump Group customized the piping to the application for a perfect fit.

Also as a part of the package, Delta provided a variable frequency drive, which translates to two important savings for customers. First, this means a soft start coming up to speed; not creating immediate high torque allows slurries to be processed before getting up to a high rpm, meaning the pump will have increased longevity in those tough applications. Second, the liquid is pushed through a set of membranes and then reused in the waste-treatment stream. The user has the ability to adjust the flow rate depending on what is happening downstream, enabling a more energy efficient system and saving money along the way. Moreover, the efficiency of the price pump that was sold with a 25HP motor was better than that of the 30HP motor that was driving the Vanton pump.

Meet the Pump

The XJ400, designed and manufactured by Price Pump, is a close-coupled, closed-impeller horizontal centrifugal pump. It was introduced as an expansion to the pump manufacturer’s existing XJ product line that increased flow capability to 1100 GPM (4164 LPM). The compact pump is ideal for a broad range of applications, including Water & Wastewater treatment, Textile Dyeing, Acid Mine Drainage, Frac Water Treatment, Irrigation/Fertilization, Municipal Water Treatment, Cooling Towers, Liquid Transfer and more.

XJ Series pumps are available in four sizes: XJ100 (1” x 1-1/2” x 8”), XJ150: 1-1/2” x 3” x 8”), XJ200 (2” x 3” x 8”) and XJ400 (4” x 4” x 8.5”).

For more information on Price Pumps, visit PricePump.com or contact Delta Electro Power at www.deltamotor.com for more details.