



Meeting Specifications

Auto supplier reduces maintenance costs by selecting submersible pumps

By Mike Bjorkman

Finding the right pump for a specific application can mean the difference between operating efficiently and spending thousands of dollars in maintenance. Though determining the ideal industrial pump requires the evaluation of critical characteristics, such as desired head, flow rate, suction, fluid attributes, etc., it is equally important to work with a reputable pump distributor that has in-depth knowledge of the many pumps on the market that are specially designed to offer specific benefits for certain applications.

In January 2014, Premier Pump Co., a national distributor and service provider of industrial pumps and equipment, was contacted by an auto parts supplier to address a persistent pump problem. The automotive manufacturer required a solution that would enable it to stop spending thousands of dollars every month on repair and replacement sump pumps.

The automotive supplier manufactures die cast parts used in an automated assembly line to construct power steering units. The power steering units are distributed to several major car manufacturers in the U.S. and abroad. The manufacturer contacted Premier Pump Co. in an effort to find the right submersible pump for its dewatering application.

The dewatering pumps, which run in series within a duplex system, pump coolant water after the machining process. The coolant water pumped contains metal fines, or shavings, that

completely saturate the water. Even though the metal fines are small in nature, the high ratio of fines to water creates an abrasive slurry. The abrasive slurry had been causing extensive damage to the sump pumps' mechanical seals, which resulted in pump failure. When the primary pump had failed, the system had been switching operation over to the secondary backup pump. Unfortunately, by the time a new primary pump had been installed, the secondary pump had failed. This problem continued for several months, and the constant turnover of pumps became quite costly to the manufacturer.

Outlining Requirements

The auto parts manufacturer contacted Premier Pump Co. to determine if there was a heavy-duty submersible pump on the market that could operate more reliably for its specific application. "This automotive manufacturer needed a durable dewatering sump pump that could process an abrasive slurry, and they needed it fast," said George T. Bennett, president of Premier Pump Co.

Premier Pump Co. was asked to source heavy duty submersible pumps that would meet the following requirements:

- **Abrasive resistant.** The new pumps had to be able to process water that was heavily saturated with metal fines. The new pumps' internal components would need to withstand the abrasive slurry to reduce the possibility of pump failure and costly downtime.

- **Proper fit.** The new pumps had to be the right size to fit in the sump in addition to being easily installed and removed for maintenance. To avoid delays and increased maintenance expenses, the new pumps would need to feature a design that would allow them to be installed and removed quickly.
- **Durability and reliability.** The new pumps would have to be durable and operate reliably, reducing the amount of time and cost the auto manufacturer had been spending to pull the old pumps for inspection, maintenance and replacement.



Personalized Recommendation

Premier Pump Co. recommended two BJM Model KB75H submersible pumps be installed in the sump system because they are designed for heavy-duty dewatering applications and proven to pump fluids containing light slurry. “After calculating the flow and head required,”

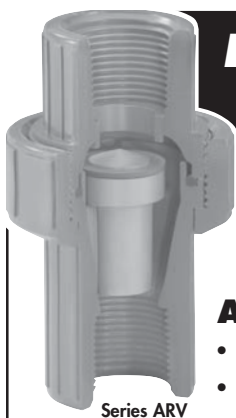
Bennett said, “the BJM pumps were selected because we knew they would work great in the application.”

The Model KB75H submersible pumps have the following features:

- **Abrasive-resistant chrome iron components add durability.**

The pump utilizes a high-chrome agitator to keep solids suspended in liquid and help prevent the pump from clogging. A wear plate on the suction side acts as a replaceable hardened surface to counter the effects of erosion. A semi-open impeller effectively handles solids for optimal pump performance.

- **Top discharge connection was designed for efficiency.** It is a “utility” pump designed with a top discharge connection. For sump applications, the top discharge connection is ideal because a side discharge connection can break off or be damaged as it is pulled and pushed into place.
- **Top discharge pumps are cooled by the pumped liquid.** The pumps can pump a sump or pit down to within inches of the bottom. Top discharge means slim; even the largest model with a 13.5 in. “waistline” will fit down a manhole with a hose attached.
- **Protection is offered for maximum reliability.** Every KB75H submersible pump model is protected by Class H motor insulation, built-in amperage and temperature overload protection; double mechanical seals of which the lower seal is made of silicon carbide and silicon carbide, and the upper seal, made of carbon and ceramic, is in a separate oil-filled seal chamber; a heavy duty lip seal that provides additional protection for the mechanical seals, helping



Series ARV

IMPROVED PIPING SYSTEM SAFETY AND PERFORMANCE

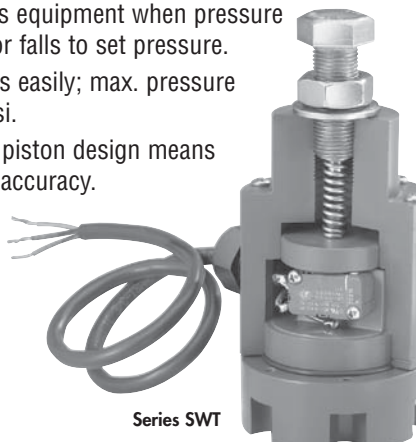
Corrosion Resistant, High-Purity Thermoplastics

Air Release Valve

- Safe expulsion of unwanted air in piping.
- Self-guided poppet seals more reliably than ball designs.

Pressure Switch

- Signals equipment when pressure rises or falls to set pressure.
- Adjusts easily; max. pressure 150 psi.
- Better piston design means better accuracy.



Series SWT



PLAST-O-MATIC
VALVES, INC.

CEDAR GROVE, NEW JERSEY

(973) 256-3000

Fax: (973) 256-4745

www.plastomatic.com

Left: The automotive parts manufacturer needed a cost-effective submersible pump for dewatering applications.

Below: The pump features abrasive resistant chrome iron components for durability.



to prevent abrasives from entering the seal chamber; and a stainless steel shaft and shaft sleeve that minimizes shaft wear due to abrasives and corrosion.

Once the automotive manufacturer approved the recommendation to use the BJM submersible pumps, Premier Pump Co. acted quickly to get a new sump pump installed at their facility. “We ordered the KB75H submersible pump on a Friday, arranged a courier to deliver the pump on Saturday morning, and had it installed and running Saturday afternoon,” Bennett said. “The automotive manufacturer installed a second KB75H in the duplex system and has a backup pump on the shelf; though they don’t expect to use it since the first pump has been running great for about 10 months now and has not been pulled once.”

The key to solving this pump problem was essentially a challenge that every pump user faces: finding the right pump for the application. Premier Pump Co. has helped the automotive manufacturer increase the efficiency of its operation and save thousands of dollars in of its maintenance budget. [IWWD](#)

Mike Bjorkman is vice president and director of marketing for BJM Corp. Bjorkman can be reached at sales@bjmpumps.com or 860.399.5937.

WaterPOD

Containerized Water Treatment Units



Small footprint water treatment systems designed for the removal of heavy metals and other contaminants from drinking water. WaterPOD containerized treatment units are the ideal solution for sites where space, cost, and schedule are critical.



(866) 823-3343 | www.adedgetech.com
sales@adedgetechnologies.com