

The pitfall of two-part pricing

by Soren Rasmussen | February 2018

A friend asked me how many propellers my company had sold. “Well”, I replied, “we’ve sold thousands of submersible mixers, but actual propellers, about 19 or 20:

He asked, “Today? This week?”

“No, since we started working in North America, 25 years ago:”

He was shocked, but I explained that our business is not spare parts, it is products that last.

The ‘razor-and-blades’ model

The idea of selling a main unit that requires frequent replacement of critical elements can be referred to as two-part pricing. In its current commercial form, it dates back to 1895, when King Camp Gillette invented the disposable razor blade. This pricing strategy became so successful that it is known as the “razor-and-blades” business model. It hooks buyers in with an attractively priced main unit - a razor handle in Gillette’s case - then charges them for expensive replacement pieces (blades) repeatedly.

From blades to propellers

Should water resource recovery operators and engineers be willing to accept disposable replacement items? Or, at a time when consulting engineers are beginning to demand more in the way of hard facts, is it time to start demanding more from mixer and pump manufacturers?

If a mixer manufacturer claims that a propeller will last 10 years, 20 years, or, forever, they should be willing to back that up with a signed contract. For a gentle application - say, 3 hours use per day - it may be perfectly true to say that a fiberglass propeller will last a lifetime. But for most installations, such a part likely will wear out and lead to the two-part model. To avoid this pitfall requires greater upfront cost, but eliminates later hassle and downtime.

Consider this hypothetical example, a facility chooses 20 mixers with fiberglass propellers, costing a total of \$400,000 - compared to mixers with stainless steel propellers, totaling \$500,000. This saves \$100,000 over the quote for mixers with stainless steel propellers. But, depending on the application, the fiberglass propellers have to be replaced after as few as 3 years to 8 years. The added cost for these parts is \$300,000, in addition to the labor, hassle, and loss of performance.

Triangle, N.C.

The Triangle Wastewater Treatment Plant in Durham County, N.C., provides a real-life case. Joe Pearce, deputy director for the county’s Engineering and Environmental Services Department, reported that he and his team had to regularly remove their mixers from service. Heavy hair mixed with plastics and cotton swabs were causing the propellers to hang up. “The clogging, especially during a storm event became more and more frequent;” Pearce said. This problem occurred “about once per month, per mixer in some of the treatment facility mixing zones;” he said. Pearce described how eventually the fiberglass blade’s gel-coat front edge wears off the propellers, making them split. “At up to almost \$20,000 per blade to replace, this was something we had to address;” he said.

Bidding process challenges

Unfortunately, the purchasing process through State Revolving Funds does not help facilities choose long-term product quality. Instead the frenzied quoting free-for-all gets in the way.

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Bidding should encourage healthy competition, but for mixer specifications, “the tail wags the dog.” Bids include precise requirements regarding the materials used for nuts and bolts, but specifications for the propeller - the very heart of the product - too often are left undefined. The implication is that almost any type of material can be put forward in a quote, even if it is doomed to fail.

Plastic always will be cheaper than stainless steel; and the plastic and fiberglass propellers will further drive down the quote competing against one and other. This widens the gap between a longer-lasting, stainless steel solution and what can appear to be an attractive low-cost alternative.

In 2013, Durham County decided to gradually replace its failing fiberglass propeller mixers with solid stainless steel. “One by one, as the fiberglass-bladed mixers inevitably split, we’ve been replacing them with the stainless steel,” Pearce said. “We fully expect fewer clogging problems and blade-wear not to be an issue. We’ve made a big saving on our maintenance program and I’m also pleased for our team that there is now much less use of winches and crane hoists and exposure to rags . . . We’re extremely happy with our investment in a much higher quality product.”

Pearce bought several 12-year-old mixers with stainless steel propellers from another facility in North Carolina.

“Even though these mixers are over a decade old,” he said, “the blades are in excellent condition. I’d gladly have these superior-quality and longer-lasting stainless steel units on board as back up, rather than fiberglass, which I know will break.”

Two-part pricing can be highly inefficient. Top economists are still baffled as to why consumers go along with it.

Perhaps some don’t realize the pitfall that exists somewhere down the line. Or they do - just as we all do with razor blades - but don’t know what the alternative is for the best long-term deal.



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