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Beaver Celebrates 4 Decades Of Growth And Innovation

NEW MARKET, ON, Canada — When Beaver Machine Corp. celebrates its 40th anniversary this year, the company will be commemorating more than just calendar years. As one of the oldest and most respected bulk vending companies in the industry, Beaver is also widely acknowledged by industry veterans as one of the most innovative firms in the business. During its four decades in the industry, Beaver's constant stream of vender enhancements has moved the industry forward in terms of mechanical function, servicing and even location of traditional bulk vending units.

HISTORY LESSON

To understand the way in which this Canadian-based company has so significantly impacted an entire industry, it is necessary to understand a little of the firm's history.

Founded in 1963 by Josef Schwarzli as Machine-O-Matic, the company originally established itself in the after-market niche of casting replacement parts for bulk venders built by a then-defunct machine manufacturer. This decidedly modest market was soon expanded into a wide range of custom casting of components for a wide range of customers, including the automotive and refrigeration industries.

However, by the mid-1960s, the firm had reentered bulk vending with its first complete machine, the "Round Beaver 16" or "RB16."

"As they cast more and more parts, it got to the point where they could make a complete gum machine. That's what ended up happening," explained Bernie Schwarzli, who heads up the company. "As the '60s progressed, we ended up making what we now call an 'RB' ('Round Beaver') machine and later made the 'SB,' which was a 'Square Beaver' machine. As the years progressed, the machine became more and more refined. The finishes got better and the quality of the machine got better. For instance, the original

machines had glass globes. Then we got into a type of 'plexi' globe, which was still breakable. And then polycarbonate. We were the first in the industry to use a polycarbonate globe."

To the untrained eye, of course, a bulk vender is a bulk vender. By all outward appearances very little has been changed on the company's original "RB" model. However, upon closer examination, it very quickly becomes obvious that there is probably not a single component of that original machine that hasn't been dramatically changed, refined and improved over the years. These changes, although subtle and stretched out over decades, have nevertheless helped reshape the industry.

"The shape is the same, but that's where it ends, the lid's different, the globe's different, the hopper is different," said Schwarzli. "Everything is different, everything has been fine-tuned, everything has been polished up. There are probably hundreds of changes by the time you count them all."

These incremental enhancements to the firm's line of machines continued through the 1970s and into the 1980s, until the launch of the "Northern Beaver" designed for capsule vending. Although not the first to market with such a machine, the "Northern Beaver" was a near instant success for the company. And it was then that the company, which had built a solid reputation on small, significant improvements, took a bold step. The company began promoting the bulk industry, and not incidentally, its own machines, outside the traditional markets.

BEYOND TRADITIONAL LOCATIONS

The idea was to expand the scope of bulk beyond supermarkets and grocery stores into shopping malls, movie theaters and other non-traditional venues. "We ventured into the shopping center shows, into the theater shows, all the trade shows and industries that generally knew nothing about bulk vending," said Schwarzli. "We started

to cross-blend our industry into their industries. It started as an effort to educate other industries about bulk. We showed them that bulk doesn't mean a dirty, scratched-up machine in the back of a gas station."

Presumably, this "educational" process was mutual. As more upscale locations began accepting the concept of bulk, Beaver launched a series of configurations and stands specifically designed for non-traditional locations. "In the early '90s we introduced the 'Towers,' which developed into the 'Tri-Towers,' which developed into the 'Pyramids.' And that's really when it took off on a big scale, because it was no longer the little gum machine anymore," recalled Schwarzli.

Interestingly, at about the same time, Beaver introduced its "New Generation" or "NG" coin-mech. The coin-mech's reliability was quickly met with widespread acceptance among operators. And, in what proved to be a strategic move for both Beaver and the industry, the company began selling the mech to original equipment manufacturers (OEMs) of such products as giant bulk venders and spiral machines. Almost overnight, the "NG" coin-mech became a key selling point for those bulk venders.

Operators found a "comfort level" in the new machine concepts when coupled with the familiar "NG" coin-mech. And while it may be an overstatement to attribute the subsequent popularity of spirals and giant machines to the "NG" mech, it is probably not an exaggeration to say that operators did find added value in the "NG." Not only was the "NG" mech's reliability attractive to typically "risk averse" operators, but should a route driver encounter a problem with one of the mechs, repair know-how and spare parts were readily available.

THE MAN BEHIND THE MACHINES

Behind all of Beaver's innovations, of course, is Josef Schwarzli. Still actively designing and refining machines, the senior Schwarzli today spends most of his time literally at the drawing board, leaving the day-to-day management of the company to his son.

In the engineering lexicon, the highest compliment is the phrase "elegant solution," which is generally defined as a simple, yet effective design. Also implied in the expression is a healthy dose of "why-didn't-I-think-of-that!" In short, elegant solutions are clever, functional and cost-effective. And, not incidentally, elegant solutions happen to be Josef Schwarzli's stock and trade.

Take the problem that involved the company's "Northern Beaver" vender. The large capsule vender included a chute into which children could stick their hands and potentially injure themselves by catching their fingers in the wheel. After



TWO GENERATIONS: Even after four decades Beaver founder Josef Schwarzli (left) is still turning out the types of visionary and innovative machine designs that have made Beaver a leading name in the bulk vending. Josef's son, Bernie Schwarzli (right), manages the firm's complex day-to-day business operations.

Beaver Machine Sampling



FROM LEFT: "FLAT-PAK," "NORTHERN BEAVER," "TRI TOWER," "RB16" (AND 4-TUBE STAND) AND "MERIDIAN"

dozens, if not hundreds of sketches, Schwarzli came up with the solution.

"The problem was not so much of them sticking their hands in there, but keeping them from getting hurt," he explained. "Instead of using baffles inside, which competitors of mine have done, the solution I liked was simply to stop them from rotating the wheel. So, now when you lift the chute cover, there is a finger that releases a latch behind the drive gear. That latch simply comes forward to engage the drive gear. That means, as soon as you lift the door as little as a half inch, it will lock the mechanism."

However, perhaps an even better example of engineering elegance is seen in Beaver's "Meridian" vender, which arrived on the scene three years ago. Although it is easy to become distracted by the unit's unique outward appearance, the real "beauty" of the "Meridian" is hidden away in its service features.

Using just the key to open the cashbox, it is possible to completely disassemble the unit via a series of simple lever and slides. That is to say, any component of the vender can be replaced without so much as using a screwdriver.

"I know the motions, the time it takes to service a machine and the difficulty with which the route man is servicing a machine," explained Schwarzli. "So I made it simpler and simpler and simpler. The fewer tools the service man has to carry, the more he will like the machine. That was absolutely the goal with the 'Meridian.' To service the 'Meridian,' you don't need any tools, other than the key to unlock it."

For the "Meridian," the goal was easier stated than accomplished. According to Schwarzli, the machine evolved from initial sketches through to first prototype over a period of more than eight months. During that time he made hundreds of drawings in which the unit underwent constant revision and refinement in its design.

These refinements, of course, go to the heart of

the engineer's art – to find the ideal solution. "Once you have something that you think may work, the big job then is to simplify it," said Schwarzli. "We usually tend to think in complicated ways. Something comes up, and the bigger the problem is perceived, the more complicated the solution will be for it. Now the trick is to peel away all the excess frills. To find the simplest and more effective solution."

In the engineering of bulk equipment, "elegant solutions" are also the most practical, explained Schwarzli. "The simplest solution will do two things," he said. "First it will be the cheapest to produce, because it will have fewer parts. Also the fewer parts you have the more room you have for the parts that remain. In bulk vending you are always cramped for space. Also, the fewer parts, the stronger those parts can be and the less there is to go wrong. The more stuff you have in there, the more potential problems you have."

BACK TO THE DRAWING BOARD

Today, Schwarzli works the same way that he always has – at an old-fashioned drawing board. But recently this work has been assisted by two engineers who take his initial sketches and turn them into Computer Assisted Design or CAD models. Once the drawings are "on-screen" they are refined even more then sent to the tool-maker for prototypes.

According to Bernie Schwarzli, the company continues to spend a large percentage of its profits on a campaign of on-going research & development for both new products, such as the "Meridian" and last year's "Flat-Pak" flat vender as well as already established product lines. "It is a constant refining process. As they come out with new materials and new manufacturing methods that make the machine more durable, we incorporate them," he said. "A lot of our refinements also come from operator comments. The biggest item, of course, has always been the coin-

mechs, that's always been the heart of the machine. For instance, in the 'NG' mech, from the first day it came out, I bet there has at least 30 different refinements in it so far."

The obvious question is: Does this kind of on-going enhancement program make business sense in an industry where return on R&D investment can run well over a decade?

"You have to keep adding value," said Josef Schwarzli. "Value is in the advantages to the operator. If we had not continuously improved, by now we – not just me, but my friendly competitors – would be dead."



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