

# Milestones

By Wayne Stellmach



## The Duotronic: Still Nifty at 50

**Woodstock, the Summer of Love, bell bottoms and Sgt. Pepper's Lonely Hearts Club Band all take a backseat to the most pivotal event of 1967: the invention of the Duotronic embalming machine.**

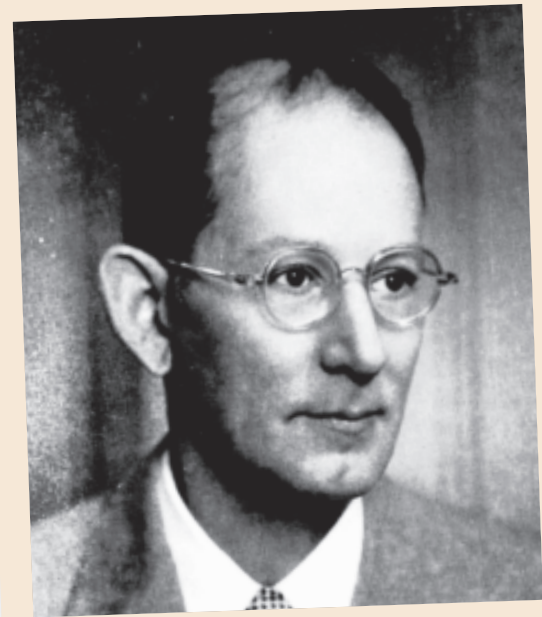
Perhaps it wasn't a cultural seismic shift, but in the world of embalming the Duotronic machine was quite an improvement over what had been used. Let's take a trip in the Way-Back Machine and learn how the Duotronic came to be.

Manufactured today by Pierce, the Duotronic was introduced in 1967 by Edwards Equipment of St. Louis, Missouri, which was a

separate but related company to Royal Bond Inc. Edwards was created by Royal Bond to focus on equipment while Royal Bond focused on chemicals. (Interesting trivia: Edwards was the maiden name of the wife of Argo Landau, one of the owners of Royal Bond.) Longtime employee Ron Poole recalled that the Royal Bond facilities took over an entire city block while

Edwards Equipment had a small space in the back of the building. But from that small space was spawned a huge innovation.

Argo Landau and his business partner Jack Laufer felt that the hodge-podge of embalming machines in use at that time were rather cumbersome and inefficient – and they were determined to design a better mousetrap. The primary technology in the market



THE DUOTRONIC ELECTRONIC INJECTOR

Photos clockwise from opposite page:  
Eugene C. Roberts in his laboratory.  
Argo Landau. Jack Laufer in his office.  
The production staff. The original  
Duotronic electronic injector.  
The front of the Royal Bond building.  
*(Photos courtesy of the Pierce Chemical)*



**Ron Poole, left, and Merle Schyomos with a Pierce Duotronic II embalming machine. (Photo courtesy of the Pierce Chemical)**

worked on gravity flow and essentially involved filling a reservoir, hoisting it up toward the ceiling and releasing the fluid via gravity. Working closely with embalmers to identify potential areas of improvement as well as consulting with Royal Bond's chief chemist Eugene C. Roberts, on chemical properties, Landau and Laufer designed a machine, still based on gravity, but using a belt-driven centrifugal pump to release the flow at the desired low pressure. What truly made this innovative, however, was the utilization of an electronic gauge that could switch to a higher injection speed when arterial blockage was encountered. This two-speed (duo) system that was controlled electronically (tronic) led to the product name Duotronic.

In addition to the efficiency and process improvement that the Duotronic brought to

embalming, it also had a cleaner design and was built for durability. Using stainless steel instead of aluminum castings used on other machines, plus a Pyrex glass tank that could hold 3-plus gallons of fluid, the Duotronic was much easier to keep clean and held up under the extremes of the prep room environment. It quickly established an avid user base among embalmers.

The very first "Duotronic by Edwards" machine was given the serial number of A-100 with the letter indicating the year 1967 (B would indicate 1968 and so on). The ruggedness and reliability of this original Duotronic machine was renowned, yet Edwards/Royal Bond kept close to the market to see if further improvement was possible. In 1977, they found a way. Incorporating pulsation to simulate a heartbeat that would

assist in unclogging arteries, the Duotronic II was introduced. In all other respects the Duotronic II was the same as the original design, and since the pulsation could be turned on or off, the Duotronic II essentially replaced the Duotronic I.

Still, Poole and his crew continue to see Duotronic I units brought in for repair and are able to keep them running. When asked why customers just don't replace them, Poole said that some people simply like them so much that if they can still be repaired, that's what they want. Poole has even seen emotional attachment, relating how a woman had brought in an old unit and wanted it refurbished because it had belonged to her husband who had died and she simply couldn't part with it. They fixed it and to his knowledge, she continues to use it to this day.

The 1970s also brought a change in the ownership of the company when Amedco Inc. purchased Royal Bond and Edwards Equipment in 1970. Amedco was also a casket manufacturer so this acquisition furthered its involvement in the death-care industry.

Speaking of the '70s, Poole began working at the company in 1973, making 2017 his 44th year working on Duotronic machines. Poole says that right from the start he was indoctrinated with a strong work ethic and a directive to ensure that the products they made must be top notch in all respects, from function to form. He points to the "just do it right" attitude of the World War II veterans who ran the company and trained everyone who worked there to adopt those same values.

"These guys were really something," Poole marvels. "When it came to manufacturing, there was simply a right way to do it and you didn't waver. That's still the way we build them today."

The dedication to innovation also never stopped, and in 1983, the Duotronic III was introduced, a low-pressure unit built with a magnetic drive pump. With magnets turning the pump, seals do not come into contact with the chemicals – thus avoiding the natural wear-and-tear issues and associated maintenance. While the Duotronic III could only operate up to 15 psi compared to the 30 psi of the Duotronic I and II, some embalmers prefer to keep pressure under 7 psi, making the Duotronic III perfectly suitable and durable.

As time went on, however, injection at higher pressures was increasingly used in certain situations leading to the development of the Duotronic IV. Introduced in 2003, the Duotronic IV was built with a positive displacement pump using gears to produce up to 100 psi pressure. While this

was a great unit that found wide acceptance in the market, improvements in pump technology resulted in a quieter and more efficient Duotronic V, supplanting the Duotronic IV that was discontinued in 2013.

While products continued to evolve, so did the company ownership. In 1990, William (Bill) Pierce purchased Royal Bond/Edwards Equipment. Bill Pierce had been a salesman for Royal Bond beginning in 1933, covering the state of Texas. By 1935 he established Morticians Supply Co. in Dallas and continued to sell Royal Bond fluids and equipment, but within a few years had developed his own line of fluids and began manufacturing as Pierce Chemical. Returning to take ownership of Royal Bond in 1990, Bill Pierce combined the chemical manufacturing under one roof in Dallas but kept the Duotronic facility in Fenton, Missouri. However, all products became branded under the Pierce name, including the product line known today as the Pierce Duotronic.

The acquisition by Pierce was amicable, and Bill Pierce took pains to ensure that Royal Bond employees were well taken care of in the transition. As it pertained to the Duotronic team, Poole recalls being treated with the utmost respect by Pierce, who made sure that everyone understood the plan and vision that would carry the company forward.

"Bill Pierce was a good man, extremely likable and approachable," Poole remembers. "He referred to the Duotronic as the Cadillac of the industry and took sincere interest in everything that we were doing. He brought me to Dallas when Pierce purchased the company so that I could better learn how things would be working. Most graciously, he allowed us to stay in Missouri to produce the

Duotronic and other equipment. In fact, he transferred the manufacturing of the Pierce Water Control unit to Fenton to keep us productive. With Mr. Pierce, everything was about quality and our reputation, and he took pride in everything."

In addition to pride throughout the company, Poole also credits his strong team in Fenton and made sure to mention his right-hand man Merle Schyros, who came straight out of the Marine Corps in 1976 to start working at the company. Together with Donald Quiel, who has been there 10 years, they are the dedicated team driving the Fenton, Missouri, service center.

The most recent chapter in the Duotronic history was the acquisition of the Pierce Companies in 2012 by Wilbert Funeral Services Inc., a company with a long history of quality products and service in the funeral service industry. Also known for innovation and a strong commitment to the industry, Wilbert is focused on continued growth for Pierce and has kept the Pierce name in recognition of its reputation.

The Pierce Duotronics continue to be improved, most recently incorporating a new stainless steel base and updating some internal components for increased durability.

However, Poole and his team still see original 1967 models come in for repairs and do their best to keep them working. However, Poole says there does come a point where things simply get so old that they have to be replaced. When that time comes, Pierce Duotronic models II, III and V are ready to go into service ... for many, many years.

Happy 50th Anniversary, Duotronic! •