

# Quantum

## FORMING SYSTEMS



### Letter from the President

Over the last several years, Quantum has experienced growth and change thanks to our continued commitment to teamwork, use of new technology, and our policy of putting our customers' needs first. Even in the face of challenging economical conditions, we are finding ways to remain innovative and competitive in the marketplace.

The remainder of this year will be exciting as we continue to expand our business into new market places around the world. We are able to offer our customers knowledge, expertise, and experience in a very demanding glass market.

Our progress in the future will be measured in terms of our ability to form mutually beneficial alliances in the global marketplace. These types of relationships will provide Quantum and our partners a unique ability to meet our customers' needs. It will also allow our customers to have the best of all available mechanisms in one machine. I plan to pursue relationships that will bring the best long-term value to all parties involved – especially our valued customers.

Quantum is dedicated to creating value for our customers, employees, and vendor partners. The new products and strategies we develop and execute are always aimed at exceeding expectations. We listen to everyone involved with our product and constantly improve our designs to build better mechanisms.

Thank you for all of your support over the last 38 years; Quantum appreciates your business. We look forward to serving our customers for many years to come.

**Steven Kozora**

*President*



**Solving your container forming problems is more than just a part of our business, it is our only business!**

### Market Spotlight: **BRAZIL**



San Paulo, Brazil

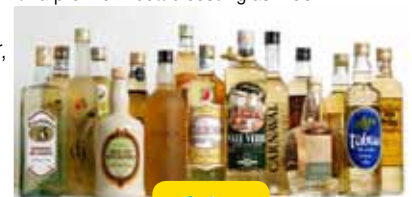
The economic and industrial growth in South America and Brazil has been nothing short of aggressive. All eyes are on Brazil with the World Cup quickly approaching, a presidential election at the end of the year, and the

Olympics taking place in 2016. The overall economic conditions are expected to remain stable after a period of rapid growth, and the markets in the cosmetic, food, beverage and pharmaceutical sectors are bound to keep increasing along with the influx of tourists expected to arrive in the country to attend the sporting events.



Euromonitor has noted that the Brazilian beauty market has an expected growth of 38% for the period of 2011 to 2016. The three major leaders in cosmetics are the US, Japan, and Brazil. The market for beauty in Brazil had a staggering growth of 142% in the past 5 years, and although Brazil is only the seventh largest world economy, it comes second to the US in the production and sales of cosmetics, just recently passing Japan.

Another national treasure not to be overlooked is the Cachaça liquor which is made from sugar cane juice that is fermented and distilled. Cachaça is now widely adopted by the upper class, with a premium bottle costing as much as \$750 USD. Currently, Brazil is the world's top sugar cane producer, and there are over 5,000 different national Cachaça brands, ranging from artisan and industrial. With a production of around 1.5 billion liters per year, Cachaça is the third most produced liquor in the world.



Cachaça

The current exportation percentage rate is less than 1%, but that is all about to change now that the United States recognizes the sugar cane liquor as a distinctive Brazilian product, in exchange, Brazil offered equal recognition of bourbon and Tennessee whiskey. This shows the potential room for growth in the international market.

With the current growth of demand in the consumer and tourism industries of Brazil for quality food and beverage retail packaging, cosmetics, pharmaceuticals, and international liquor export industries, the glass container industry has a golden opportunity to serve and grow alongside a thriving new market.



Estádio do Maracanã, venue for upcoming World Cup event

# Universal Forming Solutions and Process Flexibility



Glass container manufacturers have realized that by maintaining production flexibility they can quickly adapt to market changes and gain an edge over their competition. There are many successful glass container factories that make long production runs

using the same process to produce the same container, but the companies that are prepared to produce any container, in any process, in a variety of gob configurations, have an

advantage over those who cannot. By having the capability to produce any container, using any process, manufacturers can choose the perfect process for each job and expand their product lines. Each process; (Blow & Blow, Press & Blow and NNPB) has production advantages and disadvantages. Process flexibility allows the production staff to become more dynamic and use the benefits of each process to their advantage. A reason why many companies are not as flexible as they could be is because of the large capital investment required to purchase all of the needed equipment.

## Universal Forming Solution

The Quantum Forming system is designed to help alleviate the cost of having production flexibility. Quantum has designed their plunger mechanism cylinders to be universal, meaning the same individual cylinder is used for all three processes and a variety of center distances. As market demands require the Quantum Forming System is ready to adapt at minimal investment. Since the universal cylinder concept allows for a container manufacturer to purchase the same cylinder for use throughout the entire factory, the inventory of spare parts also becomes universal. This can dramatically reduce inventory costs and it makes supply chain management easier to control. Another advantage of Quantum's universal cylinder concept is a reduction in cost associated with operator training. When an employee is trained to understand the design, operation, and maintenance associated with a Quantum cylinder they can have the confidence and know-how to work with any I.S. machine in the factory.

## Process Flexibility

In addition to plunger mechanisms, Quantum Engineered Products also designs and manufactures Blow and Blow cartridges, Wide Mouth Press and Blow, and Narrow Neck Press and Blow positioners that compliment the plunger cylinder design. All positioners and cartridges are designed to minimize mechanical common problems that plague other systems. Quantum's positioners and cartridges are all capable of operating with internal lubrication using a standard Lincoln Lubrication system and high temperature synthetic oil. Lubricating the process equipment creates a smooth operation that can reduce mechanical problems, which cause container defects. The lubrication also extends the life of the equipment giving the user a better return on investment.

Quantum's 9100 series Blow and Blow cartridge fits into any center distance 4 1/4" and larger and any configuration; single gob, double gob, and triple gob. The cartridge is sold fully assembled and is 40% lighter than all previous designs, resulting in reduced energy at impact and a longer equipment life.

***"Quantum has designed their plunger mechanism cylinders to be universal ... As market demands require, the Quantum Forming System is ready to adapt at minimal investment."***

Quantum utilizes the advantages of the NNPB process when manufacturing not only their NNPB positioners, but also their Wide Mouth Press and Blow Positioners. The preceding sleeve concept of Quantum's positioners provide improved alignment with the neck ring resulting in a low amount of friction during the required pressing in NNPB and

WMPB. The preceding sleeve design also extends the life of the mould equipment through reduced friction and impact on the neck ring and forming plunger. Quantum uses a specially designed adapter in all press and blow positioners. The adapter is engineered to rely on a series of interconnected holes to provide maximum exhaust for improve cooling. The performance of alternative Wide Mouth Press and Plow equipment can be compromised because of the need to stop and start the cooling air, which reduces the cooling efficiency, and machine cycle speeds. The Quantum system allows for 360 degree cooling and can eliminate the problem of overheating. Using a larger diameter cooler tube along with an upward exhaust system the Quantum cylinder can provide higher speeds and better quality finishes while operating in press and blow. The full advantage of the larger cooler tube capacity cannot be obtained using other WMPB positioners that are currently on the market due to positioner exhaust limitations. The system also separates pressings gases from exhaust gases to improve process cleanliness. Quantum's recently developed 73 mm and 83 mm versions of the NNPB or preceding sleeve design opens up many production possibilities through utilizing these features.

The design of the Quantum Forming System is centered on a concept of being universal and being flexible. Through advanced engineering, forward thinking, and a desire to continually improve, Quantum has been recognized as a world leader in blank side forming. By adopting the Quantum Forming System glass container manufacturers minimize production problems on the blank side that will help reduce the overall cost of production.





## A Valued Partnership



Alex Ontiveros

**Alejandro Lozano Ontiveros** is an important part of the Quantum team. His company Ontal represents and supports Quantum in Mexico and Central America. Alex, as we know him by, and the Ontal staff are vital in assuring that one of Quantum's

most important markets is fully supported. We view Ontal as a direct extension of Quantum and we feel the staff at both companies possess parallel values and a commitment to quality customer service. Alex's many years of experience in the glass industry is a valuable asset to both Quantum and to our customers.

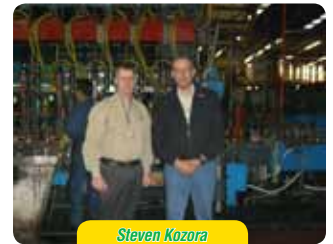
Mr. Ontiveros was born in Monclova, Coahuila, a steel and industrial city in Northern Mexico. He earned a degree in Electronic and Communications Engineering at the Instituto Tecnológico y de Estudios Superiores de Monterrey, one of the most esteemed technical universities in the world. While in college he acquired an advanced knowledge of mechanical and electrical systems, which has fostered his success and recognition in the glass container industry. Alex is fluent in English and his fluency is a valuable skill that allows him to connect a U.S. based company with Mexican and Central American customers. Alex also lived in the U.S., which gave him a deep understanding of the cultural differences between the United States and the other countries. As a teenager Alex spent a year living in the U.S. via the Rotary Exchange Student program. He then spent another three years working in New Jersey, where he began his career in the glass industry working, for a U.S. branch of the Vitro group. The years spent living in the United States were important to Alex and as he says; "All this time (spent in the U.S.) gave me great life experience as well as the knowledge of the English language. I think this time was as important as the time spent earning my degree "

After returning to Mexico Alex continued his career with the Vitro Group and FAMA Glass Forming Systems, an I.S. machine builder, based out of Monterrey, Mexico. He spent the next eighteen years working in sales for Vitro, where he gained valuable experience in the technical and business side of the glass container glass industry. While working for Vitro Alex was introduced to Quantum and its founder, Joe Kozora. The two struck up a friendship and often attended the same industry events such as the yearly AFGM conferences. It was during these years that Quantum and Alex built the foundation for their close relationship.

In 2004, Alex endeavored on a personnel entrepreneurial project and began Ontal. His company specializes in connecting Latin American glass producers with key industrial suppliers from all over the world. Some of the first partners of Ontal were Quantum Engineered Products, Inc, Ramsey Chain, and Erie Bronze. Today, Ontal supports over 15 companies located throughout the world and their products encompass nearly all areas of container glass production.

When Alex is not busy managing a successful international business he approaches his personnel life with the same vigor and enthusiasm as he brings to the office. He enjoys spending time with his family in Monterrey, Mexico. His hobbies include motorcycling and traveling to his favorite places in the Yucatan Peninsula and the Riviera Maya. Mr. Ontiveros believes in giving back to his community and in 2008 he began working with the Monterrey branch of the Rotary International Organization. This organization connects the local community leaders and uses their skills and influence to make a positive impact on social issues. His Rotary Club has been involved with programs that aim to improve the educational and nutritional structures for Mexican children. A recent project they undertook was the construction of a day care center that can house up to 90 children. Alex was part of a group that helped unite local universities, government agencies, professionals, the general public and even Rotary clubs from the U.S. to help for the construction of the Day Care Center.

Quantum is looking forward to joining Ontal in what is projected to be an exciting future in the Latin American glass container industry. Growth is set to continue and according to Alex; "the market is going through a process of modernization and improvement in terms of productivity and efficiency." We at Quantum are optimistic about a bright future for our customers, our sales team, and our entire company. Quantum is very fortunate to have such dedicated and well-respected sales professionals, like Alejandro, on our team. It gives us great pleasure to recognize the efforts and achievements of those who went above and beyond expectations.



Steven Kozara and Alex Ontiveros



Alex Ontiveros, Sergio Aguilar Alonso, Fernando Rosas Tellez, Gerardo Padilla Jasso, and Luis Urbina Menchaca

### • Quantum Values •



Passion for Customers & Results



Quality



Environment & Sustainability



People



Honesty & Integrity



# A Small Town Continuing a Rich History of Engineering



Roebling Park in Saxonburg, PA

Quantum Engineered Products is located in a quaint western Pennsylvania town named Saxonburg. Joe Kozora established Quantum in this area in 1976, but he was not the first engineer from the small town to gain worldwide recognition.

Saxonburg was founded in 1832 by John A. Roebling of Mulhausen, Germany. Roebling had a vision of creating a German community in America whose foundation would be agriculture and light manufacturing.

John studied civil engineering and architecture at Bauakademie in Berlin, but due to political unrest and a lack of career opportunities in Germany he decided to pursue a career in America. In 1831, he came to what is now known as Saxonburg where he developed and patented a process for the manufacture of "wire rope" (cable) in his small shop on his farm.

His development led to fortune and fame as a designer and builder of suspension bridges worldwide, the most famous being the Brooklyn Bridge in New York City.

Saxonburg today lives much as John A. Roebling envisioned it. His enthusiasm for innovation continues throughout the community in businesses like Quantum Engineered Products. Roebling would be proud to know that nearly 200 years later the descendants of the families who first came to this land still possess his spirit of self-determination, innovation, and industriousness.

Brooklyn Bridge, New York City



## Upcoming Trade Show Appearances



## Get To Know...



Lori Peiffer

### Day to Day at QEP:

I am responsible for many front office duties at Quantum including; answering phone calls, setting up meetings, and organizing supplier or customer visits. I am often the first point of contact for our outbound and inbound communications. A large portion of my job consists of arranging travel, passports, and securing visas. I do my

best to make traveling a safe and enjoyable experience for our management, field engineers, and sales team.

**Favorite Movies:** Days of Thunder, The Fast and the Furious

**Hobbies:** My youngest son races go-carts so most of my time is spent at the track. I enjoy the sport and the time I get to spend with my family. I also enjoy time with my two dogs; Judge, a black lab and Shelby, a golden retriever. We named both of them after the famous muscle cars.

**Favorite Music:** I like Country music. My favorite artists include Carrie Underwood, Tim McGraw, and Luke Bryan

**If I could visit one place, where would I go?** I would definitely go to Australia! I'd try and see as much wildlife as possible. I have always wanted to hold a koala bear! The landscape and scenery of Australia is so beautiful and it also seems like the people there are very relaxed and friendly.

**QEP Value you most identify yourself with:** People. I consider myself a very outgoing person and over my 12 years at Quantum I have created relationships that will last a lifetime. The people I work with are my second family and I care about them very much. Also, many of our customers, agents, and suppliers have become personal friends of mine.

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## Quantum.Events



Find out more - visit us on the web at [www.quantumforming.com](http://www.quantumforming.com)



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