

Editors Note:

In this edition, I have the pleasure to talk to you about our newsletter. I'd love to do this in person but we have some social distancing rules to obey. In this newsletter we bring to you:

- Quantum is expanding!
We are now in more than 50 countries.
- Our new marketing initiative:
Quantum's 5 Key Takeaways!
- More product information on our
Process Equipment and Process Controllers.
- A little bit of what is going on with recycling in the US and news around the world regarding single-use plastics (note: this is on a halt now due to COVID-19).

Important Announcement: COVID-19

As a global supplier of blank forming equipment, we are committed to ensuring the safety of employees whilst working hard to guarantee every delivery on-time. Our operations are open and ready to serve your needs. We are committed to supporting you and your business in the best way possible throughout this challenging situation.

At this time, we are not aware of a supply disruption caused by this virus outbreak that will impact our ability to supply a majority of our products but continue to monitor the situation. We will continue to keep our customers updated on the situation and will inform you of any specific impact on your business, if applicable.

Thank you for your continued business with Quantum Engineered Products and enjoy your reading,

Rogério Galante
Sales and Marketing Director

Quantum Plungers in more than 50 countries



Quantum is celebrating a new milestone achievement. We are now present in more than 50 countries!

We shipped mechanisms to 3 different continents this past March.

Here are the mechanisms we shipped:

- 6 Sections 2-1/8" Triple Gob;
- 8 Sections 3" Triple Gob;
- 8 Sections 3-5/16" Triple Gob;
- 8 Sections 5" Double Gob;
- 10 Sections 6-1/4" Double Gob.

The Quantum TWT® Individual Cylinder allows complete interchangeability and standardization throughout all the IS Machines. Quantum plunger mechanisms have been installed in machines from major OEMs and fit in any I.S. machine maker configuration.

The many benefits of the Quantum Plunger Mechanism include:

- Dual vented piston locks for positive process changing
- High temperature seals and bearings with cartridge design
- Dual action seals for pressure & vacuum processing
- Each cylinder has its own exhaust
- 19mm TWT® design for maximum air flow
- Available for all mould designs
- Fully protected electronic connection for CPMS®
- Positioner lubrication for NNPB and B&B
- Operational alignment is insured by design, not installation.

Quantum's 5 KEYS

You may have noticed Quantum's newest marketing initiative in Glass Worldwide magazine. This campaign is called "Quantum's 5 Key Takeaways". We created the 5 KEYS and a little short phrase to explain them:

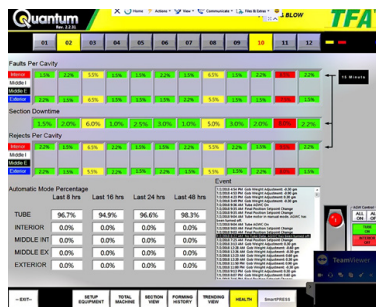
- **Quality** – Our plunger mechanisms are made to last;
- **Innovation** – We believe innovation is the quality of the future;
- **Solutions** – We listen to customer problems;
- **Service** – Our response time is the best in class;
- **Savings** – Our system increases machine speed, packing ratio and reduces downtime.

Our Sales team is always asked what are the 5 key takeaways customers should know about Quantum. If you are curious to learn a little bit more about each KEY, keep looking for our ads in Glass Worldwide magazine or contact us at info@quantumforming.com.



Learn more about Quantum TFA™ (Total Forming Analysis)

Quantum Total Forming Analysis (TFA™) system is a real-time forming process controller with automatic gob weight control. In this article we will explain what sets us apart from other process controller systems and walk you through some of our innovations:



- Remote access capabilities allow for our customers and the Quantum team to receive the same real-time information;
- Sensors have a long-lasting life because they are fully encapsulated by Quantum's Tube-Within-Tube (TWT®) technology, protecting it against debris and dirt;
- Real time monitoring of plunger movements and section operation.
- Full stroke plunger movement signal to identify gob loading issues, mechanism out of alignment, pressure differences, failing or broken equipment and other defects in Blow & Blow, Press & Blow and Narrow Neck Press & Blow processes.
- Health screen displays, for example, the percent loss per cavity, each section downtime and the percent of rejects per cavity.

Quantum is proud of delivering solutions for the glass container industry. We have a vast array of solutions for all job requirements for any IS machine and process used.

TFA™

Quantum Process Equipment

The designs for Blow & Blow, Press & Blow, and Narrow Neck Press & Blow have been developed to minimize mechanical problems in the glass forming process and provide trouble free operation. This allows production advances in quality, strength, and speed.

By understanding the day to day problems in the hot end part of the process, Quantum reduces the problems allowing greater attention to the rest of the forming process. All of our positioners and cartridges are internally lubricated for long life and trouble-free operation.

Narrow Neck Press & Blow Advantages:

- Better dual upward exhaust provides our positioner greater exhaust capacity and eliminates issues with grease and debris on lift mechanism;
- Better alignment, with the preceding sleeve, Quantum process equipment re-align neck ring and blanks every cycle improving gob loading;
- Minimal carbon build-up, internal lubrication and preceding sleeve scrapers prevents dirt and debris from being carried into positioner;
- Continuous 360° degrees cooling, our TWT® technology guarantees no air leakage. As a result, low pressure cooling doesn't have to be turned off in the loading position reducing plunger temperature and saving energy.

Blow & Blow Advantages:

- No gob bouncing, Quantum's TWT® and seal technology minimizes air leakage;
- No parison contamination with debris, our recommend thimble has a dirt excluder minimizing carbon build up;
- No bolt breakage, our tapered design cartridges reduces the impact forces reducing bolt breakage;
- Long life, our lubricated cartridges keeps the process equipment clean and reduces the force of operation. Therefore, extending product life.

Press & Blow Advantages:

- Multi-finish positioners, flexible production with less time to change between processes;
- Quick-change spacer, innovation that reduces time to change spacer without removing adapter or locking studs. This feature is also available for NNPB;
- No loose parts, unique in the market, we keep all parts inside our barrel design wide-mouth positioner;
- Better cooling, a perfect combination of our TWT® technology with our seal technology and air flow designs results in higher production speed.



FINISH FIRST

Pittsburgh Community: Glass Recycling alternatives in our community: Single Stream Recycling Using Purple Bins



The glass industry is evolving as a leading industry in the reduction of CO2 emissions. Recycling glass reduces the demand for raw material and the melting point of glass.

Unfortunately, our community recycling rates have decreased due to many counties elimination of glass curb side recycling initiatives. In our last newsletter we discussed this issue and a potential solution using single stream recycling. Our article got a lot of attention in our community. We believe consumer's will and education to recycle will change the way glass is being recycled.

Many communities in the USA are following the successful initiative of Fairfax, VA. They transitioned from curb side to single stream recycling with purple bins in strategic locations. The program has about 25 purple bins (picture) and is recycling more than 100 tons of clean glass containers per week.

We are very proud to have a similar initiative at Peters Township in Western PA. Follow the link for more info: <http://bit.ly/PetersBlueBin>

Maharashtra to impose ban of Single-use plastic by May 1st, 2020

On March 23, 2018 the Indian state of Maharashtra issued a Notification banning manufacture, sale and use of single-use plastic bags. It also banned an array of plastic products including cutlery, straws and containers. A lot of discussions occurred during GLASSPEX show in October 2019 about the implantation failure of the ban. It was a consensus that the failure was due to business and local community resistance, import of banned plastic from other states, and the political landscape with a couple of elections in 2019. By May 1st, It is expected that Maharashtra will be free of single-use plastic. The strong push is been directed by environmental state minister, Mr. Thackeray, as a result, it is expected that the glass container industry in the region will finally benefit from this initiative.



Upcoming Trade Show Appearances

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PRODUCTION • PROCESSING • PRODUCTS

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DÜSSELDORF, GERMANY

GLASSMAN
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18-19 November, Monterrey, Mexico

www.quantumforming.com

438 Saxonburg Boulevard
Saxonburg, PA 16056 USA

Tel (724) 352-5100
Fax (724) 352-4443

Quantum
FORMING SYSTEMS