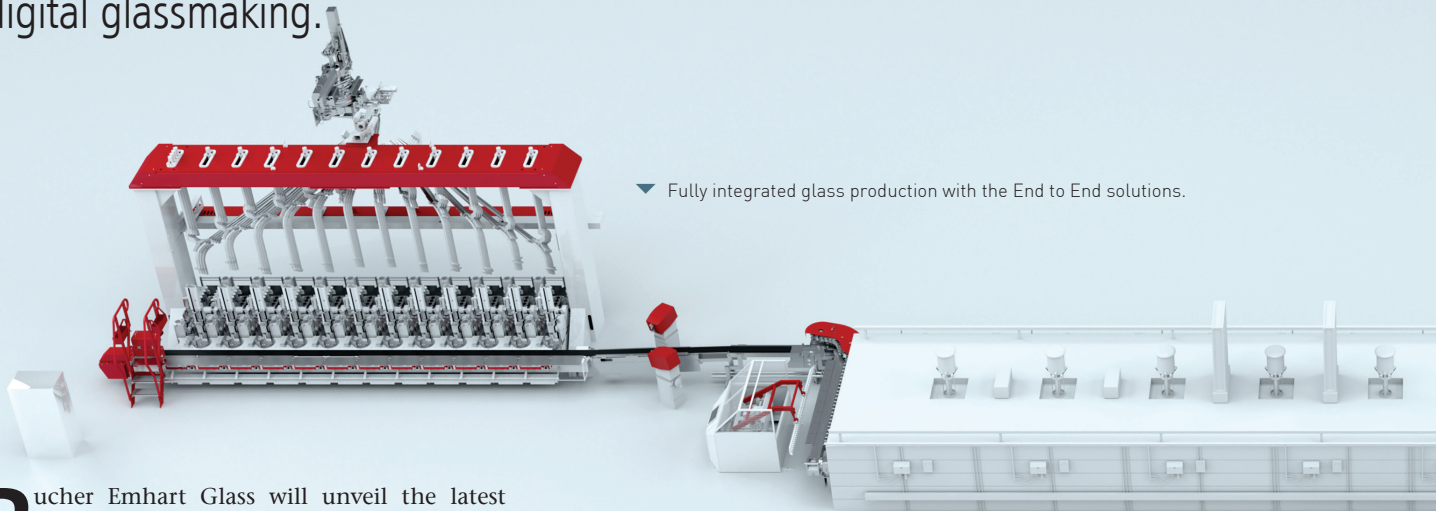


Embracing the digital era

Bucher Emhart Glass has grown since Martin Jetter took over its leadership 13 years ago. He told Greg Morris how he believes Emhart has set the trend in digital glassmaking.



▼ Fully integrated glass production with the End to End solutions.

Bucher Emhart Glass will unveil the latest innovations from its End to End technology roadmap at next month's glasstec event.

From its stand D33 in Hall 13, the company's President Martin Jetter, alongside colleagues, will discuss the latest digital technology from the roadmap.

Since 2005, when Mr Jetter took over as Emhart's President, the forming and inspection specialist has positioned itself as a total solutions provider, which is a substantial transition of the organisation.

He said: "It is a team effort of course: if I look back from when I saw Emhart for the first time, we have strengthened our market position and our technology leadership.

"Our offering is a lot wider than it used to be when we focused mainly on machine building. Now with the End to End initiative, we believe we have entered a new paradigm."

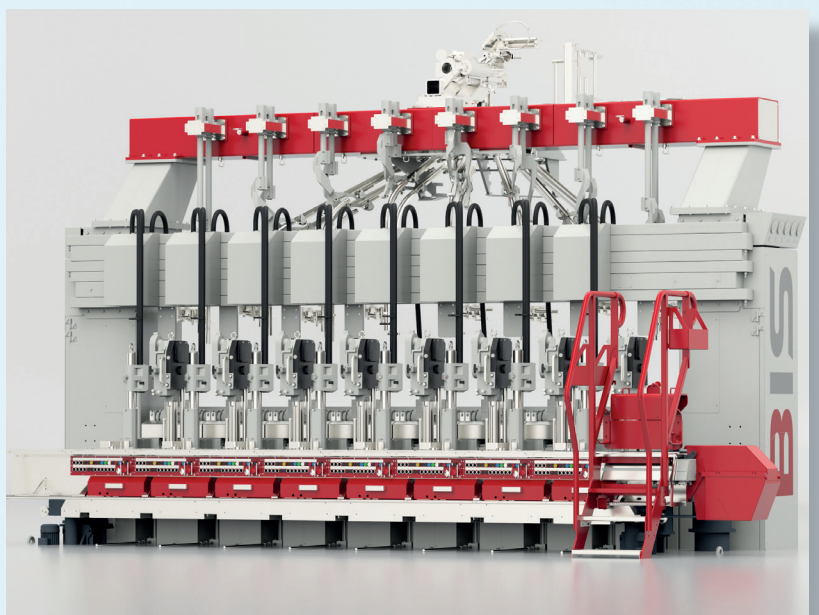
Mr Jetter has seen many changes in the past 13 years. Terminology such as Industry 4.0, automation, closed loop and feedback sensors have become more prominent in glassmaking. He believes Emhart has set the trend with many of the new technologies, primarily as a result of its investments in R&D. It spends between €16-18 million a year on R&D, a figure unmatched by any of its competitors.

Mr Jetter said: "We have played a significant role in adding sensors, increasing pack to melt, stabilising production and increasing flexibility for the glass industry. We invest in R&D not only for our own success, but we also believe we have an obligation to the industry to serve it with solutions to strengthen the position of glass against rival materials."

An industry-wide change has been the growth of consolidation among glassmakers. Manufacturers are larger now than they were years ago, and have swallowed up smaller operations. Larger conglomerates have different requirements to a one or two plant operation. A consolidated industry has both advantages and disadvantages, states Mr Jetter.

"Negotiations used to be very technical with experienced glass experts. Today, there is a whole team of lawyers and commercial people involved and contracts are much more complex. The industry is more investment-driven than it used to be which results in an increase of available capital."

▼ BIS - fully servo controlled IS machine enabling automation solutions.





▲ Mr Martin Jetter, Bucher Emhart Glass President

BIS-servo controlled forming section, including all smart sensors and safety features enabling closed loop operation for a precise and stable process.

Flexinspect T-in line inspection equipment, powered by SCOUT with the new Laser Vision Check feature.

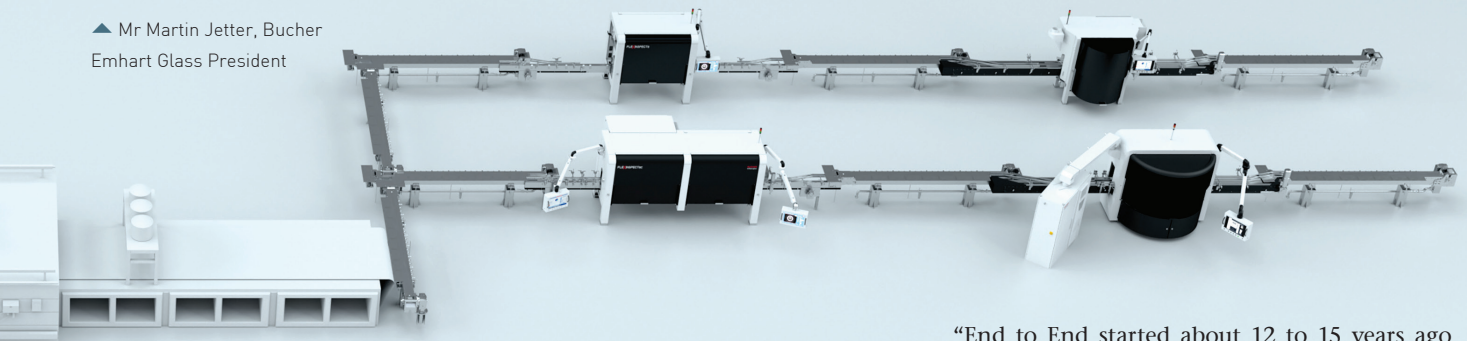
FlexControlCenter, linking the Forming to the Inspection equipment including full traceability of each container.

Care - the original parts and services keep a machine running 24/7.

Empower - its support functions enable higher plant output.

Academy - from classroom to 'under glass' training, the academy makes staff proficient on its equipment.

▲ Table 1. Emhart highlights on display at glasstec.



"On the other side, some investors have a relatively short term focus which is not favourable for the glass industry."

The industry is more competitive now and glass manufacturers have to be more productive and flexible. They require solutions which match their customers' needs.

"Flexibility and performance is key. There is a lot of competition in the glass industry and you have to achieve high performance and flexible production methods to be successful. That's why 12-section and servo quad gob machines are popular, particularly in straightforward applications such as beer production where you need a high performance to be competitive."

Industry 4.0 is a key driver today to help glassmakers become more efficient and flexible. The term has become a hot topic in manufacturing in recent years and Mr Jetter states that Emhart offered a form of digital manufacturing as early as 2004 with its FlexIS system.

Its own term for Industry 4.0 is End to End technology. Mr Jetter describes End to End as a complete fully integrated package for the digital era to improve performance, safety and stability through connecting the cold end with the hot end as well as adding hot end sensors. With the help of these sensors a lot of data is collected, consolidated and then displayed in a useful way. The data is even used for automatic process adjustments through specific algorithms and Artificial Intelligence. It also means that plants around the globe can now connect with each other and share best practices on subjects such as maintenance procedures, closed loop operation or productivity improvements..

"End to End started about 12 to 15 years ago but today we are at the point where we have the complete integrated package defined. Not all of it is ready for launch, but we know exactly what we can launch at glasstec, what we will launch in a year, in two years or in five years. It is all pre-defined.

So it is now an integrated package instead of single solutions. We also guarantee to our customers that they can upgrade all future components whenever they are launched, if they buy our machines today."

Mr Jetter was fascinated by his role in the company and the use of automation, new technologies and ideas. He still enjoys the job today and is involved in all aspects of the company.

"Emhart is a technology and market leader, but in a relatively small industry. Therefore, we are relatively lean and small but we have a huge impact in the industry with our technology.

"Whatever we do has an impact on the industry, the same as a large company in a large industry, but we are still small enough that I can be involved in many aspects of the company.

"I want to be involved in the operations, I want to meet customers, visit our factories and I want to sit in on R&D and board meetings."

A defining moment in Emhart's history was the agreement with O-I in 2013 to be its preferred partner for IS machines. The agreement is a success story for both groups.

O-I has access to the latest technological developments and at the same time it can standardise its equipment with joint Emhart/O-I technology at its plants around the globe. This agreement shows a new trend in the industry.

Continued>>

The traditional model of a glass plant that chooses several suppliers based on price and what is best for the plant appears to be falling out of fashion.

The new type of cooperation is for companies that want a true partnership, a standard and an expert who will help improve its performance in the long run.

"The partnership model is a general trend. We are in a consolidation phase, the players are getting bigger and are interested in consolidated deals and return on investment. As a consequence they are looking into cooperation and special business relationships with us."

China

Emhart was in the news recently with the takeover of the Chinese group Shandong Sanjin. It originally had a 63% stake in the company but formally completed its takeover in March. China is viewed as an important market in the medium to long term and Sanjin will concentrate on that business.

China was in recession a few years ago but is growing again.

In the past, Sanjin would sell four or six section machines but today it is not uncommon to sell a 12-section triple gob piece of equipment.

The previous drop in the market meant that smaller Chinese companies went out of business. The larger groups left standing have consolidated because, just like in the west, China's glass sector is fiercely competitive. These companies also have to meet increasing government environment requirements and require larger and faster machines for extra capacity. As a result, they are investing in modern glassmaking equipment.

"So it's the right time to take over Sanjin 100% and to drive that market, the company and the technology. The first months after the complete take-over have been extremely successful."

Focus

The company's focus now is to roll out End to End technologies and to continue to set the trend in digital glassmaking. Mr Jetter also thinks that servo controlled machines will be the next trend and become the benchmark in the market. Servo controlled machines are also one of the building blocks for End to End.

"I think we will receive more competition in this regard than today but that serves the industry. I believe it is good to have competition to drive the industry, and we do not fear to lose our leading position because of competition." He is open to collaborate with other industry players as he believes that this will bring benefits to the industry overall.

"The door is open if someone wants to cooperate in certain aspects of End to End with us."

There have been many successful moments for Emhart since Mr Jetter became President. But the introduction of automation into glassmaking is the most significant one.

"What makes me personally happy is that we were able to introduce automation into the industry. Initially, there was hardly any automation or sensors but today we have high-tech solutions for the industry.

"My background is automation, therefore I see this as an important step forward." ■



▲ FlexRadar - sensor to collect production data.

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