

# A fresh perspective on MAP

Gas control trends in the modified packaging sector

Rob Cockerill unpacks the story of HTK Hamburg GmbH and gets a fresh perspective on the modified atmosphere packaging (MAP) business in an interview with Managing Director Gunnar A. Baumert.

Founded in 1978 as a subsidiary of a leading Hamburg foreign trading company, HTK Hamburg GmbH has a rich history in the field of gas analysis and control and, more specifically, for the food, welding and cutting, medical technology, and laser and glass sectors. Gas mixing and gas analysis equipment in the food industry, for the creation of MAP packaging, is a particular area of focus for the company today – a company that has clearly come a long way in the last 40 years.

In 1993 HTK Hamburg GmbH was taken over by the Baumert family through an MBO. As a small two-man business, HTK Hamburg was initially involved in the trading of technically complex products that involved new technology and new applications that required explaining to the customers.

In a short time, the company grew from a simple trader to a complex manufacturer, which today develops and manufactures gas mixing, gas analysing and gas warning systems, as well as systems for detecting, controlling and regulating gases.

“Today our products are in use worldwide, so you could say that we are experts in all aspects of gas,” says Managing Director Gunnar A. Baumert in an interview with *gasworld*. “Today we employ 30 people at our main location in Hamburg and are

represented worldwide by our many partners. The know-how remains in-house, but some production has been outsourced to regional partners.”

“The constant further development of our own products, the development of OEM products, the use of innovative technologies, the dialogue with research institutions and always having an ear to the market; this is what makes HTK Hamburg so successful.”

HTK Hamburg’s guiding principle or internal mantra is that while others may imitate, HTK innovates. Much of that innovation today is focused on the MAP market.

## MAP market trends

“One of our major business areas is the use of gas mixing and gas analysis equipment in the food industry, for the creation of MAP packaging,” affirms Baumert. “HTK Hamburg has been active in the food industry from the very beginning, and supplies customers with gas mixing and gas analysis equipment. The market has never stopped growing and continues to develop constantly.”

“The use of MAP technology originated more than 30 years ago, when the first packages of fresh fish were packed in a protective atmosphere. And so, MAP packaging was born!”

It’s interesting that the MAP market

“The use of MAP technology originated more than 30 years ago...”

and HTK Hamburg have in many ways grown and developed in tandem. So what can Baumert tell us about the state of the MAP business today and the challenges or opportunities it faces?

The first thing he alludes to is the ongoing quest for quality control and with that, comes increasing requirements in gas analysis and control.

“The use of protective atmospheres has now become established in almost all areas of the food industry. Products look fresher, flavours are preserved, and the shelf life of the product can be greatly extended without using chemical preservatives,” he says. “Naturally, the challenge of quality control has also grown. We have to ensure that the protective atmosphere within the package is absolutely correct, in order to keep the product in prime condition and guarantee the consumer an optimum product.”

“Under current conditions, accessing our equipment at the customer’s premises presents a challenge. However, some time ago we began

to equip all of our systems with a remote maintenance facility. This capability has rarely been utilised so far, but today it is a blessing for many customers as it enables quick error analysis without having to visit the customer’s site. This saves time, and above all, money. As already said, the times are changing!”

The time are changing indeed. HTK Hamburg has been active in the food market for more than 30 years and as Baumert explains, back then everything started with the first simple residual oxygen hand analysers. These devices became more and more extensive and complex to operate over the years, however, and the MAP market itself has evolved significantly.

So beyond remote maintenance, how else has a company like HTK Hamburg been responding to these market drivers and what are the demands placed on gas analysis and control?

“We have developed new measuring methods,” Baumert responds. “For example, today we can measure the gas composition directly in the gas pipe using a newly developed density sensor that gives better than 0.25% accuracy. The new measuring method also allows for reliable analysis of nitrogen, which was previously not possible with the older standard measuring methods.”

“The philosophy of the new quality assurance is the continuous control of the gas mixture composition, resulting in only a random check of the MAP packaging being necessary.”

“A new, high-precision optical measuring method has been developed for random checking. The sensor is placed directly in the sampling needle, which is inserted through the packaging foil as before. The measuring time is now only two seconds maximum and, as no ▶





“Customers want local regional products that are packed locally, and attach great importance to quality and freshness...”

▶ gas is withdrawn from the package, we can reliably measure MAP packaging with a headspace volume of <1 ml.”

Additional filters and permanently clogged suction needles are “a thing of the past” he adds, which not only reduces the amount of consumables, but also reduces the cost of expensive repairs. The introduction of the company’s remote maintenance facility has also proved very successful, particularly in the last few weeks and months of lockdown at the hands of the Covid-19 pandemic, though Baumert acknowledges that all problems cannot always be resolved via remote maintenance.

“The deployment of service technicians was often only possible to a limited extent, so the big challenge was to produce sufficient loan units in the shortest possible time, which we would provide to our customers free of charge in an emergency. Here, by the way, we did not differentiate whether the customer used equipment from us or from a market competitor.”

“We were able to help many customers,” he adds, “irrespective of the manufacturer of their equipment. That was both a challenge and a goal.”

#### A disrupted 2020

This is a good point at which to pause for a moment and reflect upon the disrupted year that 2020 has been to date.

Our interview comes just after Baumert has finished a video conference. “They have now become part of my daily routine,” he says. “Currently, we are trying to get back to normality. The challenges of the

last few weeks have been immense, and have taken a lot out of both our customers and our employees. Many procedures have had to be modified due to the current coronavirus crisis.”

Like many, travel is the biggest example that Baumert cites. Until recently, he had around 20 appointments per week, but now occupies a large part of his working day with 10 video conferences per day. “Times are changing; suddenly there is more time available, so I am also happy to talk to you,” he affirms. “I would have had little time for that a few weeks ago!”

Baumert admits that many of HTK Hamburg’s plans for 2020 have also been disrupted by the coronavirus pandemic, including the launch of a new generation of gas analysers – but the circumstances have shone a spotlight on the digital technologies available.

“The market launch of our new generation of analysers has been delayed by the corona pandemic. However, we are taking advantage of the digital facilities, and are organising presentations and training sessions for our customers via video conference. Interested parties and our customers gratefully accept this offer.”

“We are highly confident that we will [still] achieve our goals in 2020. We know the market and our customers’ requirements, which enables us to deliver reliability and help our customers, even in chaotic times. The

challenge of the crisis is to come out of it stronger.

This experience and sense of flexibility, and always innovating, is key to not only emerging from the pandemic stronger but is also seen by Baumert as one of the biggest opportunities for HTK Hamburg to take advantage of in the next few years ahead. “Our company size gives us the flexibility to react quickly to changes in the market,” he says. “With a worldwide network of partners who have similar structures and the same exacting standards as HTK Hamburg, we ensure that the customer is always our prime focus. We develop for the market together with our customers.”

#### MAP in the future

As we head towards our conclusion, let’s come back to our application in focus here – MAP.

With such expertise and experience in the market, where does HTK Hamburg see the big opportunities or trends for the MAP business in the next 5-10 years? It’s clear that Baumert sees very regionalised trends going forward.

“The food market is currently developing back into a regional market,” he explains. “Customers want local regional products that are packed locally, and attach great importance to quality and freshness. Cheap was yesterday! Today, regional producers are growing and packaging their own products.”

For the gas analysis and control industry in this trajectory, he believes the future lies in automation of systems and devices. “I see the future in automated quality assurance. One device for MAP control, residual oxygen, leak tightness all in one system,” he concludes.

“The first systems are already in use and save the customer a lot of time, the assurance of a consistently high quality is guaranteed.” **gw**

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