

## English Biscuits Manufacturers Limited, Pakistan

NDC's MM710e Gauge Delivers Increased Productivity and Improved Quality for Greater Customer Satisfaction

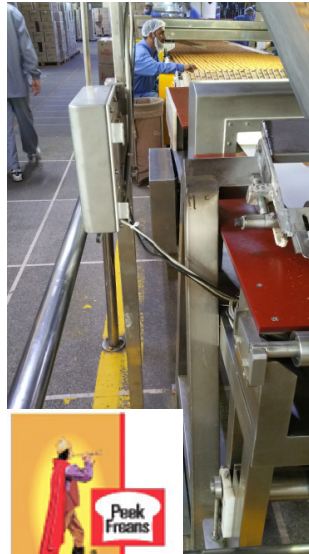
*"The ROI from installing NDC's MM710e On-line Food Gauge has greatly exceeded our expectations. It has provided us with a real-time view of our production, allowing us to take control of quality to help guarantee customer satisfaction. It has also been an incredibly reliable, easy, and convenient technology to adopt."*



Zia Abidi, Sr. Manager Production, and Ali Ashraf, Manager Production English Biscuits Manufacturers Limited

### Results

- ▶ Accurate, real-time measurement and control
- ▶ Better product quality and production efficiency
- ▶ Significant raw material savings
- ▶ Satisfied customers



### English Biscuits Manufacturers Limited

English Biscuits Manufacturers Limited ("EBM") opened its doors in 1966, operating under the name Peek-Freans Pakistan Limited. Today, more than 50 years later, market adaptability, patient growth, and conservative financing – all guided by a "Never Compromise on Quality" philosophy – have transformed the Karachi-based company into Pakistan's leading biscuit producer. Each year, EBM generates 155,000 tons of products, making it the largest biscuit manufacturer in Pakistan and one of the largest in the region.

In 2012, the company achieved a milestone when it began operating its new 80-meter production line, the longest in Asia at that time. The capabilities of this manufacturing resource were tremendous.

### EBM's Quality Control Dilemma

After investing in the high-throughput 80-meter line, EBM discovered it could not realize the line's full manufacturing potential because of a bottleneck in its process: stringent manual quality control policy and procedures. Having to rely on manual, off-line QC analysis was very time consuming and significantly slowed the line's production rate. Refusing to compromise on its commitment to produce a quality product that is rigorously and regularly monitored and checked, EBM began searching for a technological solution that could solve the problem.

## CUSTOMER TESTIMONIAL



NDC's MM710e on-line sensor and HMI for Snack Foods

EBM found its answer when it approached NDC Technologies. NDC manufactures an infrared sensor, the MM710e On-line Food Gauge, that provides accurate, timely measurement of the product parameters critical to EBM, namely, moisture and “degree of bake” (DOB).

### **NDC's MM710e Moisture Measurement Solution**

NDC's MM710e Food Gauge uses precision near infrared (NIR) measurement technology to supply incredibly accurate non-contact measurements of critical product constituencies such as moisture, oil/fat, protein and DOB. Unlike many generic gauges on the market, the performance of the MM710e Gauge is unaffected by changes in ambient lighting, temperature or relative humidity. In addition, the MM710e delivers results in only 7.5 milliseconds using its patented “light engine” optical system.

Combined with the know-how of NDC Technologies – a worldwide measurement technology leader for over 50 years – and the support of Avanceon, NDC's local representative in Karachi, the MM710e was the ideal choice to help EBM improve and maintain the output quality of its 80-meter line.

### **A Positive Performance Evaluation**

Soon after starting the MM710e Gauge, EBM began to reap the benefits of its decision. The system immediately removed the manual QC bottleneck that had hindered 80-meter line production. But the MM710e offered other benefits as well. Its ability to provide fast, repeatable real-time visibility of product moisture and DOB also enabled the company to tighten production quality variances and drastically reduce the amount of out-of-spec product it manufactured.

Because of its focus on delivering a premium product to customers, EBM has always been vitally concerned that its product are consistent in taste, texture and appearance. Having a customer open a packet of EBM biscuits and find its contents overcooked, limp, too moist or exhibiting other unsatisfactory results is a scenario the company has worked very hard to avoid. With NDC's MM710e Gauge in place, the chances of such an occurrence happening have now been drastically reduced.

Overall, the marked improvement the MM710e made to the product homogeneity and production efficiency of the 80-meter line has provided EBM with a huge return on investment in the most important category of all: customer satisfaction. Based on this unqualified success, EBM decided to integrate the MM710e into all six of its remaining production lines.

Just as there was no way of predicting in 1966 what English Biscuits Manufacturers Limited would look like today, it's anybody's guess how the company will have evolved in another 50 years. But if the product it is making then requires accurate real-time measurement of key constituencies, the benefits the MM710e has delivered to EBM's current operations almost certainly guarantee the gauge's future cousins will be a vital part of these processes as well.

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### The Benefits of Better Measurement

The MM710e was installed and commissioned on EBM's 80-meter production line within one week. The entire installation was completed with reasonable efficiency, thanks to the expertise of the well-trained Avanceon staff.

Immediately after startup, the faster, more accurate measurements provided by the MM710e gave EBM the timely information it needed to tighten process control and significantly improve processing reliability. Production quality increased by a noticeable percentage, and scrap rates fell by approximately 30%. The quality issues the line had been experiencing disappeared.

But better products weren't the only benefit the MM710e offered. Its multiple-recipe configuration feature permitted EBM to lower production startup and quality change times, greatly improving 80-meter line efficiency. Also, the MM710e's real-time moisture and DOB data helped reduce the amount of products that needed to be recycled for additional processing (e.g., drying) before being shipped. Overall, EBM was able to increase the production speed of its 80-meter line by nearly 10% without any drop in product quality!

From an operations standpoint, the MM710e's reliability and ease of use freed 80-meter line operators to focus on the core quality aspects of production while at the same time permitting EBM to actually reduce the number of people required to run the line. And the advanced design of the MM710e, backed by the support of Avanceon, enabled the company to enjoy hassle-free system maintenance.

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