Processed and Packaged Food

Product Inspection and Industrial Weighing

27 News

Meeting Changing Demands of Consumers

Production Flexibility is the Key

Changing lifestyles, new retailer quality standards and consumer demands for product diversity are placing increased pressure on food processors and packers. Enhancing flexibility in production processes is key to maintaining competitiveness.

The demand for broader product ranges, with niche offerings, to target smaller market segments is placing greater demands on food manufacturers. Requirements for smaller, healthier portions and packs designed to be consumed on the move bring greater product variety. The development of new packaging materials and formats also provide challenges for food processors and packers.

Process agility and flexibility

Having the flexibility to change production runs at short notice, and adapt deliveries to meet last minute changes enhance customer service and help with differentiation. Having the right infrastructure in place ensures customer demands are met, providing the necessary foundations.

Flexibility in inspection and weighing

Having flexible weighing and inspection techniques in place supports process agility, opens new business opportunities and provides the tools to meet future market changes. Find out more about the latest innovations in weighing and product inspection on the following pages.

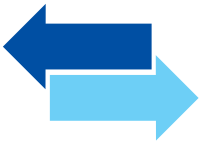
METTLER TOLEDO

Weighing and Inspection
5 Ways to Increase Flexibility

Advanced weighing and inspection technology promotes improved product quality and enhanced process efficiency. See how implementing the solutions below can help in meeting market demands and increasing production flexibility to provide a competitive edge for food manufacturers.

Wireless communication
Cables in production can be problematic. Cleaning of cables requires time and can be a limiting factor for placing weighing instruments in the best possible location. Wireless communication between terminals, printers and weighing platforms reduces these challenges and provides ergonomic production processes.

▸ **www.mt.com/ACM360-m1**



Mobile solutions
Latest innovations mean there is no need to build processes around fixed installed bench or floor scales. Mobile weighing solutions can be placed where they fit best in the process. Battery-driven floor and bench scales support weighing processes up to 12 tons and help to increase flexibility in production.

▸ **www.mt.com/ind-cable-free-floor-scale**

Efficient handling
Handling smaller packs often comes with the need to increase line speeds. Improving efficiency in the transitioning of unstable or difficult to handle products through dynamic weighing processes is critical in enhancing productivity. METTLER TOLEDO inspection solutions maximize line speeds and provide opportunities for increased production capacity.

▸ **www.mt.com/checkweighing**

The business value of connectivity
Advances in digitalization are changing the face of inspection techniques in the food industry. Download our new white paper to find out more.
www.mt.com/pi-connectivity

Faster set-up
Frequent line stops to change inspection system settings between batches damages productivity. Minimizing the duration of changeovers ensures that downtime is kept to a minimum. METTLER TOLEDO inspection systems provide automated set-up routines and the potential to inspect multiple products with the same machine setting.

- **www.mt.com/metaldetection**

Collecting process data
The accurate documentation of processes to support compliance is essential to meet food safety standards. Developments in the ability to network inspection and weighing equipment along with the use of advanced software solutions reduce the need for manual data collection, improving process efficiency and supporting digitalization.

- **www.mt.com/ProdX**
- **www.mt.com/CollectPlus**

Interview

Lee Smith
Co-chairman of the
OMAC Packaging Workgroup

The Organization for Machine Automation and Control (OMAC) is a body of manufacturing professionals. It is dedicated to supporting the machine automation and operation needs of manufacturing. OMAC provides a platform for members from various industries to collaborate. This facilitates the standardization of solutions to common problems.

Q: How much interest in automation are you seeing in the industry?

A: Manufacturers in the food industry are under pressure to make their operations as efficient as possible – it's a way of developing a competitive edge and maintaining profitability. There has been a recent upsurge of interest in plant automation, plant interconnectivity and software solutions that can push the boundaries.

Q: How has OMAC helped in process automation?

A: Production equipment is a large investment for manufacturers. In addition to the initial machine cost, manufacturers then have to pay integrators to "connect" all of the equipment. This can be a difficult, time consuming and costly exercise and is often responsible for projects running behind schedule. PackML is an industry technical standard, created by OMAC, and defines a consistent way to control and automate packaging machinery. Rather than manufacturers investing in costly equipment integration, PackML aims to make integration a "plug and play" exercise.

Q: How does this link to Industry 4.0 and the Internet of Things?

A: Industry 4.0 or the digitalization of the manufacturing industry, describes smart manufacturing and smart factory initiatives where production lines are fully autonomous and self-organizing. The specifics of such solutions are still in the process of being defined by the industry but it's clear that standardized information models and connectivity for machines are a fundamental enabler. This need is supported by PackML and the OPC UA Companion Specification.

Q: How does this support packaged food manufacturers?

A: The tools I refer to provide an ideal way of consistently quantifying performance, downtime and ultimately the OEE (overall equipment effectiveness) of a machine or line. The set of PackTags are rich enough to allow for complex custom definitions of OEE and can provide actionable insights into reducing unplanned downtime and easing performance bottlenecks.

> "Industry 4.0 and the Internet of Things are at the core of increased automation and process improvement."

Q: Can you explain an example of this in action?

A: In a typical food manufacturing plant, facilitating the efficient and effective transfer of data between locations on the factory floor is critical. When PackML is combined with a protocol like OPC UA, a production manager can monitor the performance of a metal detector on a production line remotely from his location. He is able to stay in control of processes and make informed decisions based on up-to-date information.

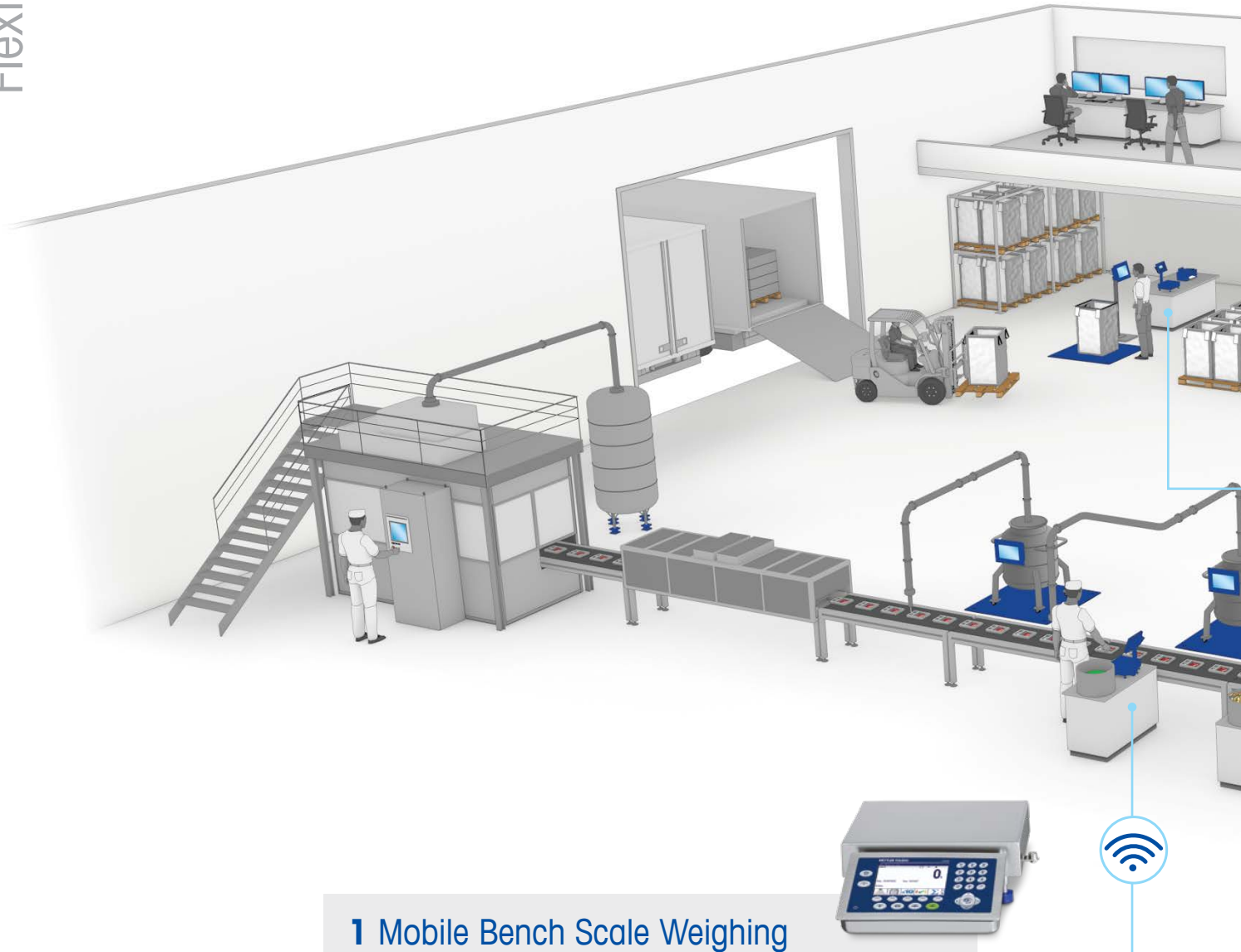
Q: What other changes do you see on the horizon for the industry?

A: OMAC and its members have identified and are currently working on a number of areas of interest for future standardization. We are actively evaluating a number of proposed initiatives within the OMAC Packaging Workgroup and are prioritizing according to the perceived needs of OMAC members and the wider industry. The Packaging Workgroup is committed to creating the next PackML revision (PackML 2020) to ensure continued support for the latest Industry 4.0 and IoT initiatives. We are also actively working on standardized HMI designs and OEE definitions, which will be delivered during 2019.

Industry Standards for OEE Improvement
Download our guide to find out more about how PackML, PackTags and OPC UA technology can improve overall equipment effectiveness (OEE).
www.mt.com/pi-omac

How Fast Can You React to Consumer Trends?
3 Ways to Increase Flexibility in Production

Frequent product changeovers have a significant impact on productivity and require equipment that can be adapted easily. Mobile and cable-free weighing solutions offer maximum flexibility and minimize time-consuming adjustments. See three ways these solutions increase your flexibility to save time and enhance margins.



1 Mobile Bench Scale Weighing

ICS scales with WLAN technology and built-in rechargeable batteries can be placed exactly where they are needed at any time. They also offer convenient data transfer for external data storage or updates.

▸ **www.mt.com/ics-scales**

2 Wireless Floor Scale Weighing

The new Cable-Free Floor Scale offers unmatched flexibility, allowing it to be placed exactly where it fits best in your process. The scale offers an extended battery life of two years and it communicates with terminals wirelessly.

www.mt.com/ind-cable-free-floor-scale

3 Flexible Label Printing

The ACM360 Bluetooth adaptor is designed to provide an undisturbed data connection between terminals and printers. It lets you print labels wirelessly from any production area for maximum flexibility.

www.mt.com/ACM360-m1

Why elephants prefer cable-free

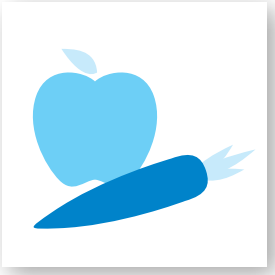
No matter where your weighing needs take you, our Cable-Free Floor Scale offers the flexibility you need.

www.mt.com/ind-cable-free-floor-scale

Ensure Complete Quality Control
At Every Stage of Production

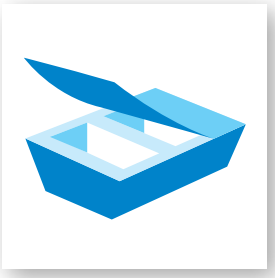
Physical contamination can occur in a number of places along the production line: in raw materials such as fish hooks and stones, during processing with broken pieces of equipment and personal effects and in end-of-line processing through packaging defects such as broken glass.

A Hazard Analysis Critical Control Point audit should be the starting point to determine the most appropriate critical control points on your production line. Sometimes the best solution is to use a different technology at different points, depending on the likely contamination sources and type of product being inspected.



Front-end inspection

Enables early contamination detection before further value is added to the product, protecting bottom line profits. This also safeguards equipment further downstream from potential damage due to larger foreign bodies.



In-process inspection

Minimizes product and material waste by rejecting any contaminated products before final packaging, saving costs. It also enables products to be re-worked, thereby protecting profits. Processing issues can be identified and rectified to optimize production line efficiencies.

End-of-line inspection

Ensures that packaged product leaving the facility is contaminant-free and adheres to brand integrity requirements. This helps to avoid product recalls and secures repeat business from satisfied customers.

Metal detection, x-ray or both?
Download our free eGuide on how to choose the most appropriate product inspection technology for your critical control points.
www.mt.com/pi-md-xr-guide

Zentis uses the Profile Advantage metal detector to inspect raw pineapple for metal at the start of production.

www.mt.com/md-zentis

Zinetti uses the X33 x-ray inspection system to inspect its pre-final packed ready meals for foreign body contamination.

www.mt.com/xr-zinetti

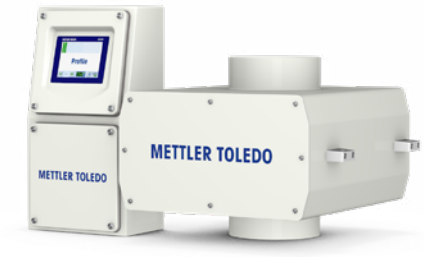
Grupo Dulcesol uses metal detection, x-ray inspection and checkweighing for complete control of its packaged products.

www.mt.com/pi-grupo-dulcesol

Product Safety and Compliance
Overcoming Metal Contamination

Metal detection systems are an essential element of any efficient and effective quality control regime. They can be installed at different stages of a production line to provide complete product safety and cost savings.

METTLER TOLEDO provides high quality, reliable metal detection solutions for almost any industrial application. Our extensive range is ideal for integration at various critical control points – front-end, in-process, and end-of-line.



T- and ST-Series

Designed for in-flight inspection of snacks and confectionery products packed using Vertical Form, Fill and Seal (VFFS) processes.

▸ **www.mt.com/md-vertical**

Profile Compact

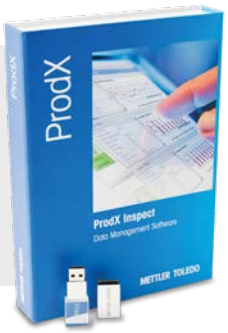
High detection sensitivity in smaller packaged foods such as small trays and chocolate bars, where insertion space is limited.

▸ **www.mt.com/md-profile-compact**

Compliance and Productivity

Measurement and recording of data from metal detection systems enables in-depth analysis of your production line.

▸ **www.mt.com/ProdX**



Profile Advantage

Superior metal detection sensitivity in frozen, chilled, hot, wet and cooling products and those packaged in metalized film to detect smaller metal contaminants and virtually eliminate false rejects.

▸ **www.mt.com/md-profileadvantage**

Profile

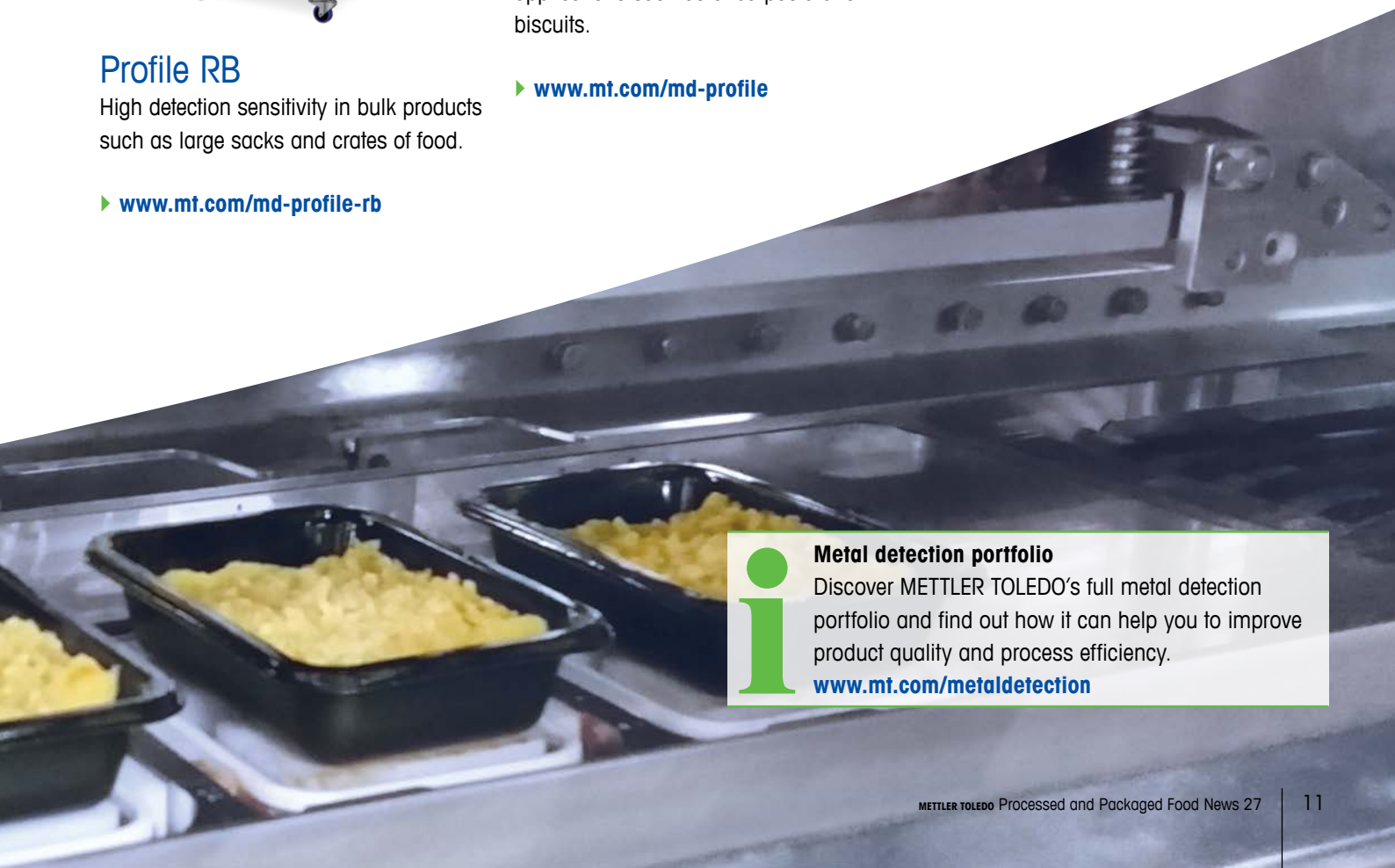
Enhanced sensitivity in dry packaged applications such as dried pasta and biscuits.

▸ **www.mt.com/md-profile**

Profile RB

High detection sensitivity in bulk products such as large sacks and crates of food.

▸ **www.mt.com/md-profile-rb**



Metal detection portfolio
Discover METTLER TOLEDO's full metal detection portfolio and find out how it can help you to improve product quality and process efficiency.
www.mt.com/metaldetection

YOUR VOICE MATTERS

Tell us your opinion
for a chance to win an Apple Watch!

To take the quick survey, visit:
www.mt.com/ind-survey-2019

Are Your Products Safe and Compliant?
Update Your Know-How

A rise in product recalls and increasing demands from food safety standards mean you can't afford to take risks. Find out more about improving product quality, streamlining manufacturing processes and ensuring compliance with industry standards.

Food safety masterclass: On-demand webinar

This on-demand webinar provides guidance on how to prevent physical contamination, how to identify the causes of product recalls and explains the importance of zero contamination.

▸ **www.mt.com/pi-foodsafetymasterclass**

Avoiding a food safety crisis – are you prepared?

Our Food Regulatory Guide provides know-how in 16 different areas, where weighing and foreign body control helps to ensure your products are compliant with global food standards and are of high quality.

▸ **www.mt.com/ind-food-guides**

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