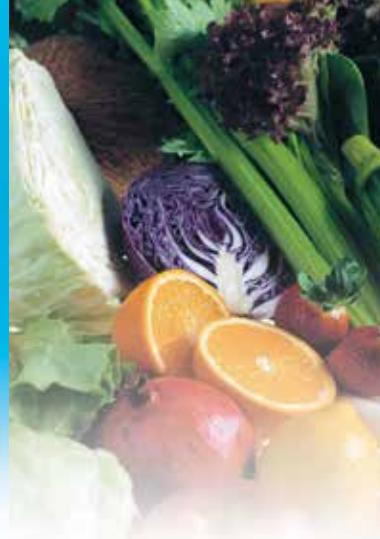


# Fruit & Vegetables

Industrial Weighing & Product Inspection



# 15 News

September 2014

## Real-Time Results

### Get Production Data as it Happens

**Providing top quality is of highest importance for a German fruit juice and drinks producer. That's why their quality control in the bottling area relies on FreeWeigh.Net® to immediately react on process deviations and to successfully pass their numerous audits.**

#### Achieving success with strong brands

An important strategic competitive advantage for the Eckes-Granini Group is the development and maintenance of strong brands. The Group is represented by international brand Granini and strong local brands throughout Europe. The Eckes-Granini Group places top importance on achieving the highest quality, from selecting the best fruits and raw ingredients to careful production methods right through to the final product.

#### As clean as an operating room

Production is mainly focused on filling plastic bottles and cartons and uses highly modern technology. In-house clean rooms are used to bottle juices, nectars and

juice drinks under sterile conditions. Thanks to these sterile rooms, the production process can completely forgo the use of preservatives. Vitamins and flavor additives are especially protected through the cold aseptic filling process.

#### Fill level tolerance

The Bad Fallingbostel location mainly bottles juices and drinks for Hohes C, Granini, and Naturell brands. According to Mr. Tödter, the IT coordinator at the Bad Fallingbostel plant, juice production achieves an average fill level tolerance of one percent or 10 milliliters per 1,000 milliliters. At Eckes-Granini, random spot checks are carefully conducted to ensure that legally prescribed minimum fill levels are observed while



**METTLER TOLEDO**

overfilling is minimized. Previously, these quality parameters were recorded and analyzed manually. For some time now, Eckes-Granini has used FreeWeigh.Net, statistical quality control software from METTLER TOLEDO, in this plant.



Bottle filling with fill level tolerance of maximum 1.5 percent

FreeWeigh.Net supports easy monitoring and recording of production data centrally and allows for the connection of different static and dynamic checkweighers or even metal detectors for process optimization. On the basis of legally prescribed global standards and with the

help of formulas and parameters, deviations from the routine process are detected immediately, while costs incurred from overfilling are minimized. In addition, other relevant quality parameters, such as leak-tightness of packaging, can be recorded and quickly analyzed thanks to configurable standard reports.

#### Reliable data for every audit

FreeWeigh.Net simplifies day-to-day quality control in the bottling area, allows for quick intervention if process deviations occur and provides important data for successful audits. Eckes-Granini is able to meet important requirements for further growth and increases in productivity while maintaining its high quality standards.

[www.eckes-granini.com](http://www.eckes-granini.com)  
► [www.mt.com/ind-fruit1](http://www.mt.com/ind-fruit1)

#### Key customer benefits of FreeWeigh.Net®

- Significant reduction of product overfill cost
- Compliance to legal-fill requirements
- Standardized and simplified processes
- Online monitoring and alarming
- Short reaction time in production
- Automated reporting
- Scalable system implementation and enhancement
- ERP integration
- Fast ROI (<12 months)

## FreeWeigh.Net®



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## Predicting the Future Diagnostics Prevent Costly Errors

**Load-cell failure during production not only can throw off batch quality, but it also can cost your business valuable time and money. New load-cell technology monitors your weighing constantly, alerting you to potential failures before they happen.**

Analog weighing technology can leave you wondering how accurate your data really is. With analog load cells, data from each cell is averaged and the data from individual cells in a tank – or floor – scale weighing system is lost. If one analog load cell fails, it usually goes undetected until a periodic calibration. That means weighing errors can go undetected for a long time, causing bad batches, costly product giveaway or illegal underfilling.

#### Predicting a problem

The PowerMount™ weigh module is a further step in leveraging POWERCELL® technology for reliable production and for quick recovery. SWB605 PowerMount

weigh modules using POWERCELL technology alerts you when a failure has occurred or when it could occur in future. This allows you to plan maintenance and services instead of simply reacting to failures, which causes lost production time. SWB605 PowerMount ensures every load-cell deviation is discovered right away. Operators can be alerted to variances with an email, text message or log file entry.

#### Individual Load-Cell Monitoring

SWB605 PowerMount delivers load-cell diagnostics data and true high-performance weight values that can be monitored individually for errors. When

uptime matters, SWB605 PowerMount continuously reads the load-cell signal to verify proper functionality. Without this continuous monitoring, out-of-symmetry errors and out-of-range temperatures can wreak havoc on product quality, causing significant costs.

It can take hours to replace an analog load cell. POWERCELL load cells are designed in a way that they take just minutes to replace, cutting downtime to almost nothing. SWB605 PowerMount with POWERCELL technology ensures reliable production, allowing you to avoid faulty batches and to recover quickly when failures do occur.

► [www.mt.com/ind-fruit2](http://www.mt.com/ind-fruit2)

## Weight of Evidence

### Weigh Data Improves Productivity

**Product giveaway is costly and wasteful, and it can easily be controlled with weighing. Manual checkweighers help food manufacturers gain visibility of their quality-control processes and enhance their productivity without loss of quality.**

Wilkin and Sons are manufacturers of premium quality foods, their exclusive “Little Scarlet” strawberries have been celebrated for generations. Their 125<sup>th</sup> anniversary was marked by a visit from Her Majesty The Queen. When Wilkin and Sons found themselves seeking to expand

their existing fresh-fruit pack-house capacity by introducing an additional line, it seemed natural for them to improve their overall efficiency at the same time.

The primary issue was a need to have more visibility over the performance of

their packing facility, in particular their weight control and compliance with customer specifications. They were hoping to gather this data from in-use scales and consolidate it centrally to allow for reporting and analysis, which could help them to maximize the efficiency of their operation. It would also give them a better view to operators' performance and provide the statistical data to allow the company to maintain certain productivity rates.

Ultimately, local METTLER TOLEDO weighing experts Bernie Gately and Phil Tyler suggested the installation of ICS449 colorWeight<sup>TM</sup>-enabled scales. These hygienic scales' LCD screens register with an unmistakable backlight of red or green after settling – red indicating balance contents are not yet in an acceptable tolerance range, and green indicating an operator's ability to “go ahead” and move onto the next weigh.

#### Central review enhances productivity

The scales were further equipped with METTLER TOLEDO UK's locally developed data-capture software and customer-specific SQL Server Reporting Services reports and dashboards, enabling easier central productivity review and better decision-making to maintain processing standards. This has allowed more precise



ongoing weight-monitoring of Wilkin and Sons' punnets.

“We've had a very good experience and excellent support and service from Bernie and Phil,” noted Andrey Ivanov, Wilkin and Sons' farm manager. “The ‘traffic light’ system on the ICS scales has improved our productivity, while easier data capture has allowed better overall quality control on outgoing products.”

[www.tiptree.com](http://www.tiptree.com)

► [www.mt.com/ind-fruit3](http://www.mt.com/ind-fruit3)



ICS469

#### Key customer benefits

- Rugged, hygienic construction for long life in tough industrial environments
- Ergonomic design for ease of operation
- Less exhaustion with color display technology
- Alibi memory and calibration logs for auditable quality records

## Look Inside

### Hygienic Design for Easy Cleaning

Ineffective equipment cleaning results in higher contamination risks. By selecting the right equipment that is designed for easy cleaning in hygienically demanding environments, food manufacturers can reduce cleaning effort, maximize equipment uptime and speed up operational efficiency.



#### Basic Platform Pit Scale



##### Fast loading

These floor scales can be placed in a pit, flush with the floor. Their flat design makes it easy to load items on and off of them. However, the pit below the scale can easily collect debris, which requires work. This solution is often used in areas with high traffic.

#### Basic Platform Ramp Scale



##### Efficient cleaning

These floor scales are surrounded by ramps for loading goods on and off of them. Cleaning underneath this type of scale involves physically lifting the platforms, but its built-in gas springs enable one person to raise and lower the platform with just one hand.

#### Low-Profile Scale



##### High flexibility

For applications that do not allow a pit installation, low-profile scales are not higher than 45 millimeters above ground. When used with a portability option, these scales can be moved where needed and offer the flexibility to weigh goods at different places during the production process.

Hygienically designed floor scales are a game-changer when it comes to efficiency, because they allow manufacturers to do a better job of maintenance and cleaning with fewer resources and in less time.

These scales are not a one-size-fits-all proposition. There are several floor-scale design options, all created with hygiene and efficient cleaning in mind. Typically three construction types are available, each offering a different advantage.

▶ [www.mt.com/ind-fruit4](http://www.mt.com/ind-fruit4)

#### Key customer benefits

Our floor scales are designed to:

- Ensure food safety and quality with hygienic constructions
- Save costs and reduce waste with qualified weighing solutions
- Increase productivity by improving process speed

Watch our video to see the design:

▶ [www.mt.com/ind-fruit5](http://www.mt.com/ind-fruit5)

#### Recommended construction types in terms of cleaning efficiency

Profile of scale	Flat	Standard		Low Profile		
Type of installation	pit	top-of-floor installation		top-of-floor installation		
Type of load plate	liftable load plate	fixed load plate	liftable load plate	fixed load plate	fixed load plate on mobile scale	liftable load plate
Environment	dry & light wet	dry & light wet	wet & harsh	dry & light wet	wet & harsh	wet & harsh
Ease of cleaning	++	+	+++	+	++	+++
Loading effort	+++	+	+	++	++	++

Standard



Good



Very Good



## Made-to-Measure Accuracy

### Checkweighers Designed to Fit Your Process

Imagine a checkweighing system engineered to precisely meet your requirements. A system with a robust and reliable design. A system that is adaptable and flexible to meet the demands of numerous applications.

#### Adaptability – performance – reliability

METTLER TOLEDO has released a new platform for checkweighing – the C3000 System. It provides improved product inspection reliability, increased overall equipment efficiency (OEE) and lower Total Cost of Ownership (TCO).

The new highly robust and stable frame construction provides increased accuracy and enhances performance by up to 33 percent at high throughput rates.

A redesigned conveyor system enables smooth product handling for manufacturers at very high speeds of up to 600 products per minute with a wider weighing range.

#### Service and support

A complete safety and risk assessment according to legal requirements is carried out for each machine before shipping. Post-delivery on-site customer support is provided locally by the global network of METTLER TOLEDO service engineers.

For best possible process control, C3000 System checkweighers can be easily connected with other equipment in production lines as well as with quality control software programs and data collection systems, such as ProdX.

#### C3000 System checkweighers deliver:

- Highest Performance
- Ease of Use and Integration
- Best-in-Class Safety
- Best Total Cost of Ownership (TCO)

#### Future-proof, modular design

The C3000 System is designed with the future of your business in mind. The modular construction provides the flexibility to evolve with your requirements should your needs change. Systems are constructed with a robust tubular base frame providing an open structure and minimized horizontal surfaces. This improves hygiene and facilitates easy access for maintenance and service activities. Additionally, slotted toothed belt guards on the conveyors are designed for fast and easy inspection, even while production is running.



C3000 System

► [www.mt.com/ind-fruit6](http://www.mt.com/ind-fruit6)



Your idea – our solution. The C3000 System offers customized solutions, adapted to your needs.

#### Easy to Use



All relevant information is available in one screen. The user interface features intuitive navigation and supports daily activities with advanced diagnostic tools.

#### User Safety



Pusher guards and an easy-to-access Emergency Stop button are just two examples for our strong commitment to user safety.

#### Advanced Metal Detection



The integrated Profile Detector can be specified to suit a large range of product types delivering maximum detection sensitivity.

## Regulation Ready

### Machine Vision Helps Manufacturers Comply

In recent years, American and European agencies have called for new food safety and labelling regulations, with penalties for manufacturers who fail to comply. Increased regulations make vision-inspection systems even more important to manufacturers wishing to avoid product recalls and fines.



Advances in technology allow systems like the Mosaic to perform inspection on round, un-oriented products

#### High recall costs

Globally, about 50 percent of all product recalls are due to incorrect labelling. This represents a huge cost for manufacturers and clearly, steps need to be taken to reduce this alarming figure. As an example of new legislation, the Food Safety Modernization Act (FSMA) was passed by the United States Congress in 2010 – largely in response to a report from the Center for Disease Control estimating that 48 million Americans are exposed to contaminated food every year. In Europe, the European Food Safety Authority has increased calls for better labelling, causing EU members to tighten regulations and conduct reviews of existing food safety programs. While regulations on label content vary from country to country, package information needs to address the following questions:

1. Is the food safe? – “Best before” dates, for example, reassure consumers that food is fit to eat, while allergy warnings prevent consumption of food that may trigger an allergic reaction in some consumers.
2. Where did this food come from? – In the event of a product recall, producers and retailers must locate all af-

fected goods and remove them from shelves quickly. Producers track products using lot numbers and barcodes, as well as producer name, product name and “best before” dates. If this information is missing or illegible, there is no way of knowing if defective products have been removed.

#### Vision inspection supersedes manual inspection

In the past, production speeds were slow enough for manual or visual inspection to take place, but this is inevitably unreliable, particularly as line speeds increase. Some manufacturers have relied on random sampling to catch product packaging errors. While this may have been acceptable in the past, modern regulations make inspection by sampling alone insufficient. Vision inspection actively improves quality control processes on high throughput lines. Advantages include a higher accuracy rate, reduced inspection staff and inspection of every product.

#### Perfect vision inspection solutions

With extensive knowledge of Product Inspection, METTLER TOLEDO CI-Vision offers a wide range of vision inspection



Vision-inspection systems perform the same inspections as a sensor – barcode reading, for example – but are capable of performing more complex tasks such as verifying lot codes.

systems to address inspection challenges. From trays and flat packages to round, unoriented containers, there is a vision-inspection system to address the specific needs of the manufacturer.

Vision inspection works by capturing images of containers and searching specific areas of those containers for information such as labels, bar code, unique

graphical elements or lot codes. Once that data is located, the system checks it against pre-defined parameters to ensure it is correct and allows the product to proceed down the line. Should the data in question be incorrect, the system triggers a rejection mechanism to remove the non-compliant item.

► [www.mt.com/ind-fruit7](http://www.mt.com/ind-fruit7)



The CLS is capable of simultaneous inspections of the top and bottom of a tray or flat package.

# Knowledge Portal

## Online Library Offers Expertise for Food Manufacturers



### Webinars

Short on-demand webinars for up-to-date industry information on topics including:

- Increase Operational Efficiency with Weighing & Measuring
- Designing Effective Food Safety Management Programs for GFSI Schemes



### Guides

Resources for planning, buying and complying with regulations on topics including:

- Food Productivity Guide
- Food Regulatory Guide



### White Papers

Expertise on industry trends and issues, including topics such as:

- Food Safety & The Trend Toward Certification
- Weighing within Legal Limits

**One stop for industry expertise and resources to support your weighing processes, buying decisions and process efficiency.**

► [www.mt.com/ind-fruit8](http://www.mt.com/ind-fruit8)

**[www.mt.com/ind-fruit9](http://www.mt.com/ind-fruit9)**

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