

Meat & Poultry, Ready Meals

Industrial Weighing and Measuring



5 News

Meals for 33 000 Airline Passengers Daily Fast Checkweigher Ensures Quality

LSG Sky Chefs Deutschland GmbH provides meals for 70 percent of the flights leaving from Munich. Just-in-time deliveries and satisfied customers are a must in this industry. A key element for fast production and high quality is the user-friendly BBA449check+ checkweigher.

In the catering industry, compliance with legal quality guidelines is a matter of course and second nature for industry employees. And in the strictly organized and highly regulated airline industry, catering specialists such as LSG Sky Chefs must also adhere to extremely stringent requirements for punctuality and quality. The tiniest deviations can cost dearly.

In order to achieve the highest quality under the ever-present deadline pressure while maintaining high output quantities, LSG Sky Chefs includes modern METTLER TOLEDO BBA449check+ checkweighers in manufacturing processes. These checkweighers meet the internal requirements for equipping the entire operation with the latest in state-of-the-art catering technology.

Innovations in portioning

At LSG Sky Chefs, an innovative team continually develops new baked goods to delight passengers, especially those in business class and first class, with an ever-changing selection of delicious creations. In LSG Sky Chef's own bakery, just the right touch is required to portion out the pre-prepared dough to the exact weight specifications. Understandably, with a baking volume of over 40 000 pieces daily, portion weight is an important economic aspect.

A weighty issue

Thus, creative minds and artisan skill are not the only innovative factors in the bakery. By keeping a handle on weight control, METTLER TOLEDO manual checkweighers play an important objective role



METTLER TOLEDO

in determining whether a product is a high flyer or a flop. “We can no longer imagine our processes without the use of checkweighers,” explains Günter Rusch, in charge of weighing technology at LSG Sky Chefs in Munich. “In particular, the new BBA449check+ checkweigher is extremely popular due to its clear display and smart functions.”

**Clearly smart:
“check” control function**

A brief glance is all it takes for a clear reading of the scale display. With the smart “check” function, the backlighting on the large, high-intensity display changes color when the weight is outside the tolerance limits (“traffic-light” function). This eliminates the need for tedious analysis and lengthy mental calcu-

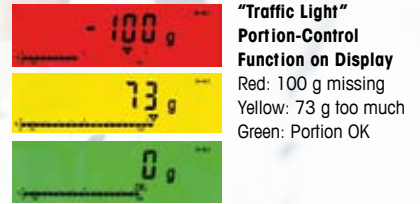


lations. The weight status is displayed as a bar chart (showing the distance to the target weight) and as an actual weight deviation (for example, “-100”).

Precision at “Take-Away” speed

...it’s not rocket science! In the cold-dish and warm-dish kitchens of LSG Sky Chefs in Munich, speed is of the essence. Each day, employees create about 33 000 meals and the portion weights must be correct! Whether for a main dish, salad, or dessert, the BBA449check+ guarantees fast and precise portions with its “Take Away” function. For example, salad is portioned with the reservoir on the scale. The employee removes salad from the container until the BBA449check+ display changes colors, signaling that the required amount has been reached.

Each time the entire portion is removed, the scale returns to its tare weight automatically. Thus, it is immediately ready for the next portion to be removed, without requiring the push of a button. Advantage: The salad portion bowls can remain on the conveyor belt line. This sophisticated function is not the only reason the BBA449check+ is a hit in LSG Sky Chefs operations. It is battery-



**“Traffic Light”
Portion-Control
Function on Display**
Red: 100 g missing
Yellow: 73 g too much
Green: Portion OK

operating, it is extremely mobile and can be set up wherever it is needed at any time.

Hygiene – it’s serious business

Contamination of food by bacteria or other pathogens must be avoided especially in the airline industry! To rule out the possibility of such emergencies, LSG Sky Chefs ensures strict compliance with the applicable international standards for food safety and hygiene.

For production equipment, this means that technical equipment must have special hygienic designs that enable easy and thorough cleaning and prevent build-up of dirt and food deposits. For this reason, LSG Sky Chefs puts its trust in scales by METTLER TOLEDO, which are EHEDG* and NSF** certified and, with the new BBA449check+, offer the highest current standard of hygiene in this class.

► www.mt.com/ind-hygienic-design

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BBA449check+

	Platform Size (mm)	
	240 × 300	300 × 400
Weighing range	Resolution: 2 × 5000d (Weights and Measures approved) Optional: 30 000 d	
12 lbs	0.02 lbs	–
30 lbs	0.05 lbs	–
60 lbs	–	0.1 lbs
Options: Rechargeable battery, WLAN, protective cover, printer		
Certificates: *EHEDG, **NSF, ***GMP-compliant, ****IP69k		

* European Hygienic Engineering & Design Group
** National Sanitation Foundation; *** Good Manufacturing Practice
**** Ingress Protection (IP69k = high-pressure cleaning)

Solutions for the Meat Processing Industry



One of the largest Bison meat processing companies in the United States asked METTLER TOLEDO to help them to meet increasing regulatory demands in accurate record keeping, inventory control, hygiene and fulfilling traceability.

The boom in healthy eating and information on trans fats have put consumers on watch for low fat, high protein food choices. According to the United States Department of Agriculture (USDA), Buffalo (Bison) meat is lower in fat and higher in protein than halibut, salmon, swordfish and trout; has three times more iron than chicken; and has half of the artery-clogging fats of soy. This has created an increased demand for buffalo meat in traditional grocery stores and restaurants.

Raising and processing Bison is a costly job. Breeding stock, fencing and processing facilities, coupled with the high demand for this premium meat has led to high selling prices. This demand has also produced higher regulation standards from the USDA and one of the largest Bison processing companies in the United States came to METTLER TOLEDO to help meet those standards.

Fullfilling higher regulations standards

Regulations now require accurate record keeping and inventory control for Bison meat. The customer was in need of an electronic system to provide accurate data that could be archived and that would hold up in a very harsh and demanding environment. This solution would also need to be networked over an existing computer system and work in conjunction with an existing automated and proprietary rinsing system. The METTLER TOLEDO representative worked closely with the processing plant manager and determined that the

JagXtreme harsh environment terminal (now replaced with IND780) would fit perfectly into the existing track-rail weighing system. The meat is weighed while suspended from hooks mounted to the track-rail. The weights are then sent to the terminal for tracking purposes. Due to the need to regularly wash the rail system, it was imperative that the JagXtreme be able to handle water and ingress.

Full traceability

Advanced reporting and record keeping of the meat was also a new concern for the plant. The new Food and Drug Administration (FDA) regulations for Bison required full tracking from farm to freight. The advanced networking capabilities of the Jag-Basic software system (now replaced with TaskExpert™ programming tool) allows for immediate real-time tracking of the raw materials in process. The processing plant is now able to record live hot and cold weights which improved the quality tracking of the meat and the invoicing weight for customers. The previous procedure for tracking these weights was manual; this system was tedious and allowed for user-errors. The new electronic system also provides a history and tracking for both internal and FDA regulated reports. The increase in demand and business also required the processing plant to monitor more closely the time the process took from start to finish. Regulations also required strict tracking of product in and out of the facilities. This new networked system also allowed supervisors to watch the operations in real time and identify areas of production congestion. The outgoing product was

logged through the use of barcoded labels with consecutive numbering. This barcoding system also reduced operator data delays and errors.

The total integration of this system took the customer from an almost fully manual operation to a fast-paced plant that produces the majority of the Bison meat sold throughout the United States. Bison continues to grow in popularity in both restaurants and grocery stores and lean Bison was recently added to the American Heart Association's Eating Plan for Healthy Americans.

IP69k

Dustproof and suitable for cleaning with high-pressure equipment



Key Features: IND780 Advanced Weighing Terminal

- Housing: Stainless steel, IP69k
- Keyboard: 30-key tactile keyboard with numeric keypad, navigation keys, function keys
- Display: Backlit LCD graphic display; 320 x 240 pixels; QVGA, 145 mm; monochrome or active TFT color
- Mounting options: Panel, desk, wall
- Suitable platforms/weigh modules: Up to 4 analog per channel, POWERCELL®, MTX®, IDNet Scale, X-Base SICS
- A/D rate: Greater than 366 Hz internal
- Digital Input/Output: Maximum 40 inputs, 56 outputs with internal and external I/O options
- Interfaces: Serial, Digital I/O, A-B Remote I/O, Profibus L2 DP, ControlNet, Ethernet/IP, Modbus TCP, DeviceNet, TaskExpert
- TaskExpert™ flow-chart based development tool

Food Safety and Accurate Weight Supported In One Step

The Spanish poultry farming and processing company AVICU successfully combines weighing with food safety.

AVICU sells over 80% of their products through retail chains and has an 8% market share for fresh packed chickens and 2% of cooked chicken products in Spain. As a BRC and IFS certified company fulfilling food safety requirements such as traceability is essential.

Successful collaboration

AVICU has worked with METTLER TOLEDO Spain for many years. The long-lasting relationship originates from three pillars.

- Consulting: METTLER TOLEDO product and system specialists support AVICU in determining the best solution for cost-effectively maintaining production, quality and regulatory requirements.
- Solutions: METTLER TOLEDO is the one source for all weighing related products, software, engineering and systems needed to meet AVICU's specific requirements of hygienic design, ruggedness, traceability and data integration.
- Services: From calibration, preventative

maintenance up to system support METTLER TOLEDO services ensure consistent uptime and compliance.

AVICU confirms: "METTLER TOLEDO provides precise, long-lasting scales, excellent software systems and services. The very smooth relationship with the product and system specialists, who always try to understand and "feel" our needs, is one of the main reasons why we like working with METTLER TOLEDO."

In 2006 it was time to renew parts of AVICU's order preparation system. AVICU sells packed poultry products in pre-commissioned plastic boxes. METTLER TOLEDO was asked to modernize the labeling and box weighing system after it had been working without any problems for many years. The software had to be updated and the weighing terminals replaced. AVICU states: "After speaking with the METTLER TOLEDO system specialists, we naturally had to consider them as they provided excellent

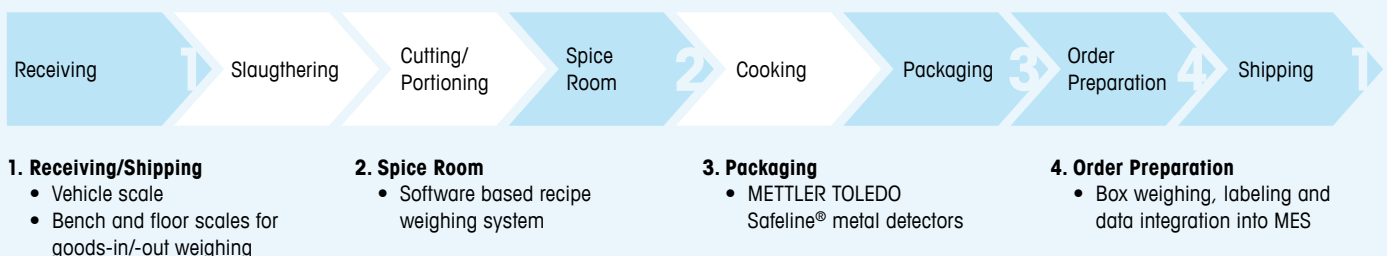


METTLER TOLEDO Safeline® metal detector helps to guarantee food safety



Vehicle scale for fast and precise accounting for incoming and outgoing goods

METTLER TOLEDO solutions at AVICU, Guadalajara (Spain):





AVICU's key benefits

Scales are important identification points to collect traceability data such as product IDs, weight values, batch numbers and for clear labeling of products and boxes. AVICU: "Due to the excellent consultancy and system support the conjunction between

- precise net weight determination for billing reasons
- traceability data and
- maintaining food safety by using hygienically designed equipment is succeeded.

We like to work with a competent supplier of latest, innovative weighing equipment and software, which runs on top of that a competent service organization with fast reaction times."

software and hardware which met our needs with regard to the integration of data and food safety."

Box weighing for harsh environment

The three recently installed box weighing stations at AVICU are equipped with METTLER TOLEDO ID30 industrial weighing PCs, PBA430 weighing platform, label printers and software for data processing. ID30 is a rugged industrial weighing terminal and high-performing PC in one solution. Top efficiency and high flexibility are bundled in a corrosion-resistant stainless steel housing, fully IP69k protected for high pressure wash down procedures. The terminal comprises an elegantly flat screen display with an intuitive touch screen human-machine-interface and a separate computer-unit.

Weighing platforms used in hygienically sensitive areas need to be cleaned easily especially if they are installed in difficult to reach places like under a conveyor belt. The PBA430 weighing platform fulfils these premises: First of all with a hermetically

sealed stainless steel load cell, IP68 and IP69k protected for prolonged submersion and high pressure cleaning, and secondly with a hygienically designed construction in accordance with the EHEDG and NSF guidelines for use in hygienically sensitive areas.

Data integration made efficiently

Boxes arriving over a conveyor belt are identified for tare weight subtraction. Out of five box categories operators are selecting the right one, net weight is determined and associated with product data. The software written by METTLER TOLEDO system specialists provides the correct batch number and expiry date associated with the products inside the box and prints out labels including net weight. The system receives data from the higher-level MES and returns data back to it. AVICU underlines: "With the new software weight data, batch numbers, and expiry date are among others stored in a SQL database. If a problem with the MES system occurred in the past, this caused stoppage of the whole process. Now, when the system is down, the box weighing activities can simply continue independently."



Box weighing installation with IP69k protected weighing terminal and PBA430 weighing platform



ID30 PC weighing terminal with label printer and data processing software



EHEDG: European Hygienic Engineering and Design Group
NSF: National Sanitation Foundation (US)



Dustproof and suitable for cleaning with high-pressure equipment



Statistical Quality Control

The Highest Precision for Wet Areas

Special measuring instruments are needed for quality control in environments with strict hygiene requirements. With the network-capable IND469rem terminal and the KA3s/KA6s scales, METTLER TOLEDO has the ideal weighing system for connection to the FreeWeigh.Net® quality control software. These devices are made of stainless steel and are a great way to meet high-precision and strict hygiene requirements.

FreeWeigh.Net® – Quality control in a network

More and more customers are demanding networked quality control for their products, i.e. central monitoring and evaluation of filling quantities as well as other import quality attributes. With its PC-based FreeWeigh.Net® Statistical Quality Control system, METTLER TOLEDO offers an efficient solution for this demanding task. And when the IND469 terminal is coupled with the KA3s or KA6s platforms, this offers quality control in wet areas.

Maximum IP protection and simple cleaning

The IND469rem terminal has been designed to comply with the latest EHEDG and NSF hygiene design guidelines and is therefore ideally suited for use in wet areas. It is both dustproof and waterproof in line with IP69k (DIN40050) and its extremely fine stainless steel surface (Ra <0.8µm) makes it a breeze to clean.

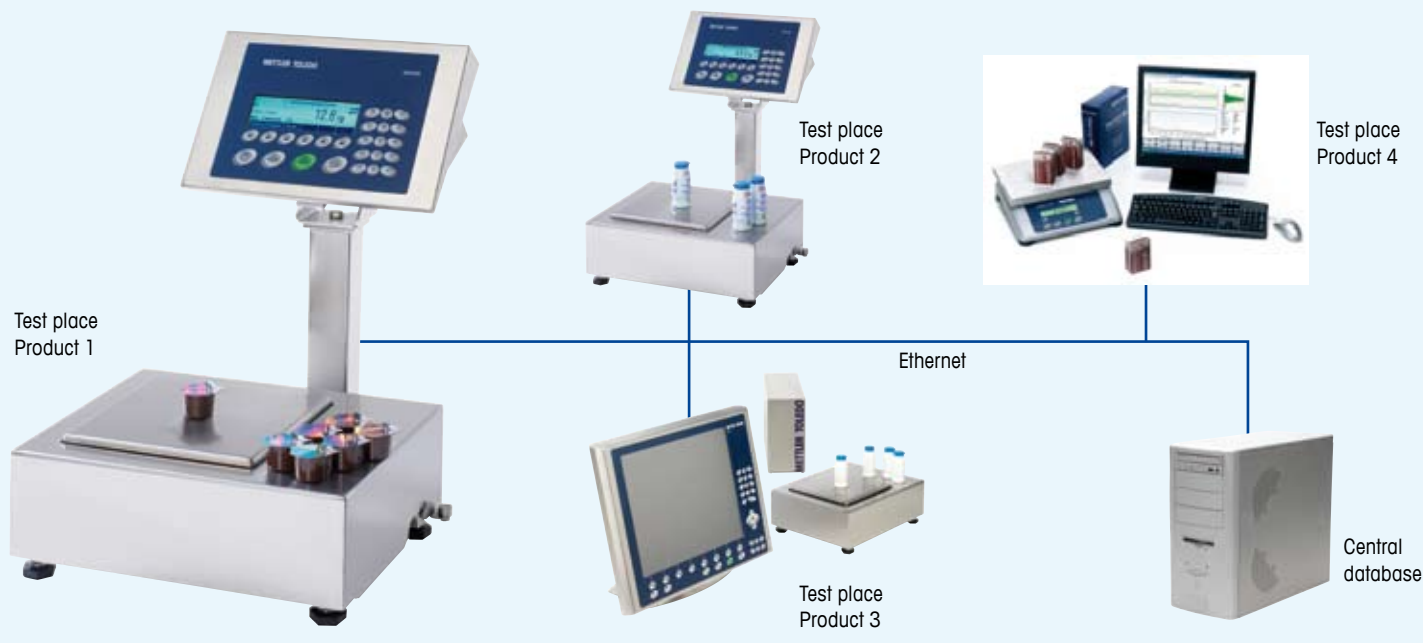
Network connection is hygienic and saves costs

The terminal is connected to the FreeWeigh.Net® network via an Ethernet interface or simply and cheaply without the need for cables via WLAN.



Properties IND469rem and KA3s/KA6s

- Integrated remote application for network operation with FreeWeigh.Net®
- For monitoring finished packs with net filling quantities of:
5g–3000g (KA3s: 0.1g Weights and Measures approved)
10g–6000g (KA6s: 0.2g Weights and Measures approved)
- Stainless steel housing
- Waterproof and dustproof
IND469rem: in line with IP69k
KA3s/KA6s: in line with IP66/IP67
- RS232, PS/2, Ethernet or WLAN connection



Net weight monitoring with filling quantities starting from 5g



0.1 g Weights and Measures approved resolution for the strictest hygiene requirements

With its KA3s and KA6s scales, METTLER TOLEDO has set new standards in the fields of waterproof and dustproof weighing platforms. Thanks to its IP66/67 degree of protection, the weighing platform can be rinsed with water with absolutely no issues. With a Weights and Measures

approved resolution starting from 0.1 g (not Weights and Measures approved from 0.01 g), these devices are suitable for a wide range of applications. Scales that are used for fill level monitoring of finished packs are subject to legal stipulations. To ensure that labeling regulations are observed, the KA3s/KA6s platforms allow finished packs to be weighed in wet areas for the first time with net filling quantities start-

What you stand to gain

- Net weight monitoring from 5g in wet areas thanks to 0.1 g Weights and Measures approved resolution
- Time-saving and thorough cleaning thanks to
 - IP66/IP67/IP69k degree of protection
 - Complies with EHEDG und NSF hygiene guidelines
- Complies with finished pack regulations
- Saves unnecessary overfilling costs

FreeWeigh.Net®

EHEDG



EHEDG: European Hygienic Engineering and Design Group
NSF: National Sanitation Foundation (US)

A Wide Range of Solutions to Improve Processes

1. Low profile floor scale with lifting device: PUA579
2. Vehicle scales



Share our Knowledge

Learn from our specialists – our knowledge and experience are at your disposal in print or online.

Visit our website to find out more about our solutions for the meat, poultry and ready meals industry. You can find information on a wide range of topics to improve your processes, including case studies, application stories, return-on investment calculators, plus all the product information you need to make an informed decision.

1. ID30 PC Weighing Terminal
2. Statistical Quality Control/Statistical Process Control Brochure
3. Weighing Solutions for the Food Industry
4. Industrial Weighing Catalog 2008



- 1
- 2
- 3
- 4

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