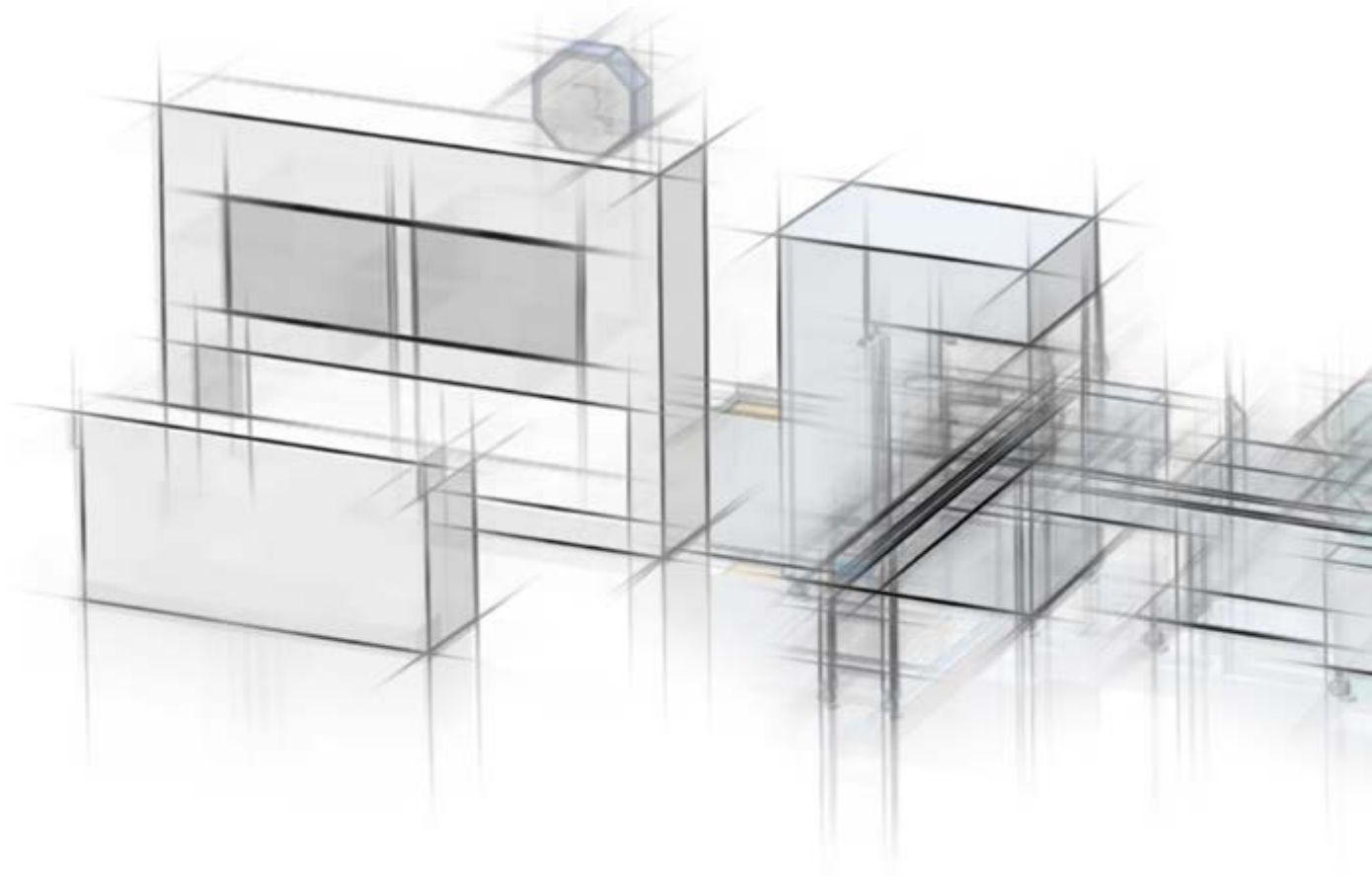




Achieve Greater Productivity
in Pharmaceutical Production

METTLER TOLEDO





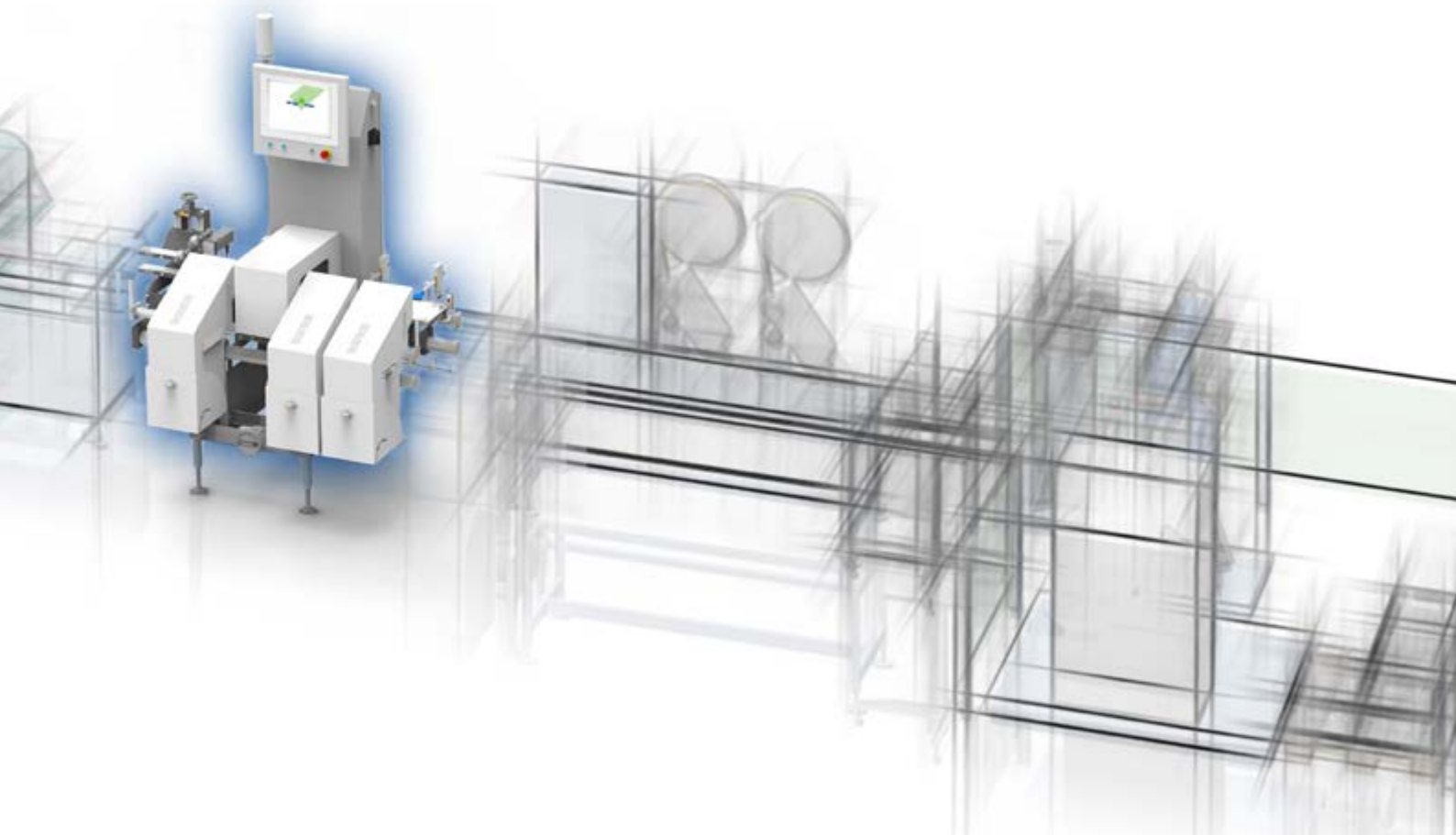
Modern Weighing Technology – an Extensive Range of Expertise

Precise and efficient weighing systems for inline product inspection are a key element of any pharmaceutical production line. Ensuring maximum process reliability and the highest throughput, whilst maintaining regulatory compliance requires a competent and trusted solutions provider. Discover METTLER TOLEDO's weighing solutions. With decades of experience in the pharmaceutical industry and a range of advanced modular product designs, METTLER TOLEDO can ensure successful production processes for you.

- Maximum product and process reliability (compliance)
- Maximum system performance and availability (performance)
- Maximum process control and system efficiency (efficiency)

With our expertise and project management skills, we can help deliver the competitive advantages you seek from your production operations. Whether it involves individual weighing or multi-functional inspection systems, we can help develop the best all-round solution for your blister-pack, cardboard packaging, vial and tube lines. Additional technologies, such as vision or x-ray inspection solutions can also be easily integrated into any weighing, labelling or serialization system.

You too can benefit from advice provided by our industry specialists - read on to learn more about METTLER TOLEDO's range of expertise.



Leading Expertise

You can benefit from our decades of experience and expert knowledge of equipment for pharmaceutical production lines. By reviewing your operating conditions and potential for process optimization, we can help select the right solution for your production line.

Customer-specific Solutions

METTLER TOLEDO understands that every pharmaceutical production line is unique. That's why our flexible systems and advanced components are designed to meet the technical and operating requirements of any production line. By utilizing the different combinations of mechanical and electronic systems available, we can ensure none of your project requirements go unfulfilled.

Maximum Efficiency

Commissioning your system doesn't mean our work is done. Our support continues throughout the service life of the solution, ensuring the success of your weighing system as part of an effective production process. We use your sales markets and technology options as benchmarks to continually measure the effectiveness of our solutions. Our customers can rest assured that they will experience maximum reliability and performance both now and in the future.



Maximum Product and Process Reliability

Production processes in the pharmaceutical industry are carried out within a framework of stringent quality and safety standards; with few market environments being as sensitive as the pharmaceutical industry. With METTLER TOLEDO, you are protected against product defects, counterfeiting and human error, ensuring that you provide accurate product information and guarantee full traceability throughout the global supply chain.

The manufacturers proof that all products and processes fulfil the relevant specifications provides the central basis for inspection technology: once inspected, the packaging is safely filled, instruction leaflets inserted, and precise labelling and dates added. Packaged products are then serialized in accordance with the necessary regulations and sealed if

necessary. Our experts understand the different global requirements and develop exacting solutions to maintain them.

Innovative software applications guarantee only authorized users can gain access to sensitive information, control functions and rejected products. There are also provisions in place to ensure that

system operation will be secure – the weighing systems have a GMP-certified design, with minimal horizontal surfaces and the option to empty production lines with little effort. An optional full enclosure for the system can increase process reliability even further.



Applications to Increase Process Reliability

Saving Process Data



All process steps are documented in 'change-proof' software modules. Consequently, any data entries and changes to settings made by employees can be traced at any time.

Process Optimization That Goes Beyond the System



If the system detects boxes with open flaps or sloping angles, the checkweigher software receives a signal from the light barrier and tracks the position of the boxes. As these products can cause bottlenecks and line stoppages, they are separated before reaching the checkweigher's unloading conveyor belt, which increases the reliability of the line.

100% Traceable



Legal requirements demand transparency in global pharmaceutical logistics. Given their effectiveness at printing unique sequences of digits, data matrix codes and barcodes, our systems are able to meet the current legal requirements and are also equipped to meet the legal requirements of the future. Tamper-proof adhesive labels guarantee maximum product reliability and provide the best possible protection for the consumer and the brands reputation.

Twice as Reliable: Transfer Unit from Upper and Lower Belts



In an ideal situation, checkweighers will be installed directly after the cartoner. The latter usually has a product output unit fitted with side grip belts. In this case, the best solution to ensure the boxes are transferred safely to the checkweigher is a transfer unit with an upper and lower belt. A solid structure, precise guidance and optimum motor synchronization, ensure the best possible product throughput, without any disruptive vibrations or deformation of the products. They also ensure top quality and reading reliability when packaging is being labelled or undergoing optical control.

Maximum System Performance and Availability

METTLER TOLEDO checkweighers are highly reliable production environment components, resulting in less downtime and greater Overall Equipment Effectiveness (OEE). The weighing system's mechanical and electronic components are optimized with pharmaceutical applications in mind.

When planning a solution, our experts always work out which options will provide the system with reliable protection against breakdown. Mechanical transportation of the packaging brings with it several opportunities for optimization, ensuring optimum transfer of products from systems upstream in the process and minimization of disruptive factors.

Furthermore, optical sensors are able to detect packages with sloping angles or that have been closed incorrectly, before these lead to critical mechanical disruption. Special software detects errors in the series and reports these to the relevant system station. It's even possible to avoid costly system stoppages and work steps as part of internal accuracy checks on the

weighing technology. The large belt width on our function modules means it's possible to create solutions tailored perfectly for you. The system has a monitoring function too, which helps to prevent disruption. As such, total operation costs can be reduced.



Mechanical Options for Optimum Product Throughput

Side Grip Belts



Side grip belts with special drives ensure safe and smooth transfer of the product to the inspection system and then on to the adjoining conveyor belt.

D15 Precision Conveyors



Unlike conventional conveyor belts connected in series, D15 conveyors use small 15mm pulleys to prevent lightweight products and items with small contact surfaces from getting stuck, turning or wobbling at the transition point and potentially disrupting the process.

Digital Adjustment Control



To save time when changing items over and to minimize operating errors, the best solution is to digitally adjust all changes made to settings for conveyor belts, sensors and other components. Lateral adjustment of the whole weighing unit using a hand wheel makes quick and reliable adjustment of the 'track centre' possible for different widths of packaging.

A Viable Solution: Automatic Fill Level Optimization is Worth it



In addition to ensuring prescribed quantity tolerances are observed, modern weighing technology also detects over and underfilling tendencies at an early stage for liquid pharmaceutical products. Here, advanced software algorithms continuously analyse the weighing results and if necessary, readjust the filling station.

Maximum Process Control and System Efficiency

Information is key to ensuring that optimization of processes is cost-effective. Digital management tools are available for METTLER TOLEDO product inspection systems, which capture all the data and process it as required. This allows users to make processes on their own data networks more transparent and efficient at any given point. They receive an accurate overview of the system's effectiveness as a whole, as well as potential for savings.

All METTLER TOLEDO testing equipment is integrated seamlessly into one central control environment, which removes the need for slow and error-prone manual inspection

of packaging lines. It thus takes much less effort to update and manage data, create the necessary documents, control product changeovers and locate sources of errors in the process.

The benefits of digital networking are particularly felt when you are running multiple production lines.



Innovative Data Management

Product Data Management



Just one click is all it takes to manage, retrieve, combine or forward item data efficiently for one or more packaging lines on your PC, minimizing the time lost and sources of errors as a result of manual data handling.

Pharma Statistic Tool



A statistical tool developed specifically for pharmaceutical production stores all test data without gaps. The filter function makes it possible to evaluate data quickly as and when required e.g. to follow up one specific batch or to optimize certain test functions. If parameters change, substatistics are generated automatically.

Networking with ProdX



Intelligent automation and control functions make operation of inspection systems more transparent and efficient. Comprehensive ProdX data management software enables you to visualize deviations in subprocesses at an early stage and correct these immediately. Meter readings, statistics and all critical process data can be retrieved easily via the central network for convenient use there and then.

600 Tubes per Minute: Throughput According to Plan



The packaging system's Overall Equipment Effectiveness (OEE) may be impacted if products are difficult to convey e.g. tubes. At the same time, inspection systems should be designed for the throughputs required and still have capacity left for future growth.

METTLER TOLEDO's weighing systems are armed and ready for the highest throughput rates, without these having any serious impact on weighing accuracy.

A Professional Partnership for the Entire Service Life

How do you ensure that your inspection systems will be reliable and cost-effective for its entire service life? Our project and service specialists are on hand to help you with this at every stage. You can benefit from our leading expertise, instead of using your own resources to optimize systems.

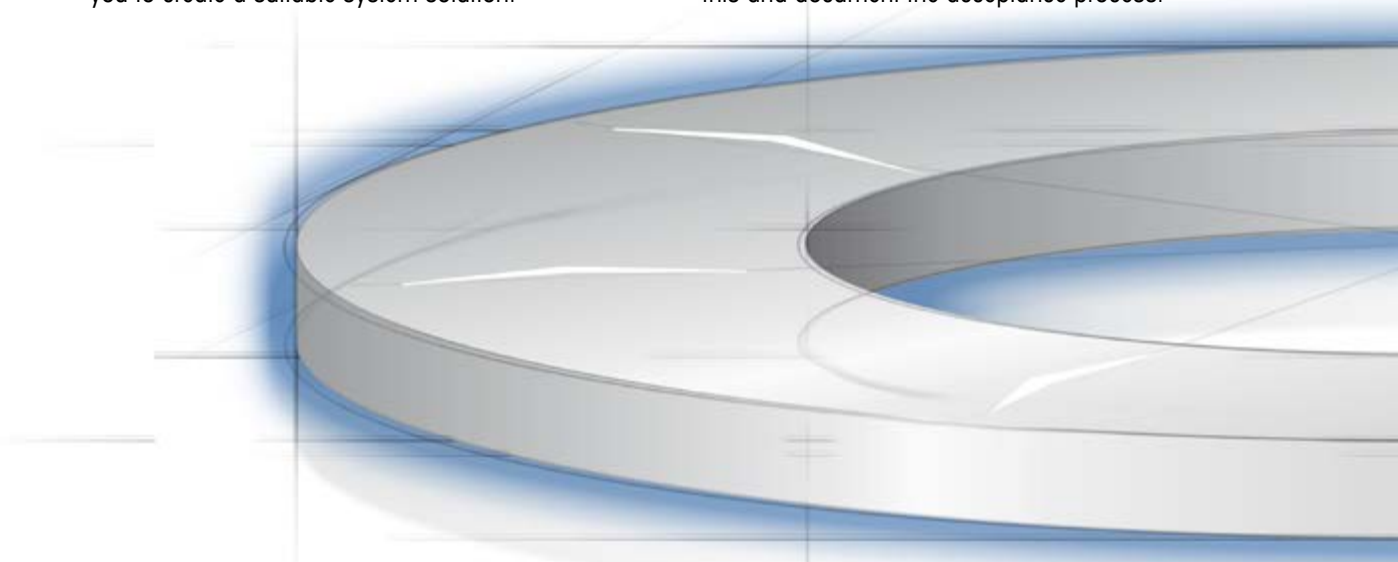
It's worth making use of our advice and range of services – whether at the start of the project, during the professional commissioning of your line or during maintenance programmes.

1. Planning and Advice

We determine and assess which test processes are relevant to your operating conditions and work with you to create a suitable system solution.

2. Factory Acceptance

With regard to the Factory Acceptance Test (FAT), we assemble your system in our inspection department and conduct all necessary tests together with you, using original product samples where necessary. Our project management and QA specialists accompany you through this and document the acceptance process.



7. Modernization

We want you to be armed and ready for the future: That's why the service life of METTLER TOLEDO systems doesn't simply end when market requirements change or you wish to upgrade the functions. With options for upgrades available, we are able to modernize your test systems at any time, ready for future compliance requirements.



Equipment Qualification for your Pharmaceutical System

Ensuring Good Manufacturing Practice via Equipment Qualification (EQ) is more than simply observing legal provisions, it also guarantees the accuracy and reliability that you require from your systems output. Combining professional installation with expert equipment qualification will ensure optimum performance for your system. EQ-Pac (Equipment Qualification) can offer you in-depth installation documentation, test procedures and specification ranges, and delivers reliable results that provide objective evidence for official audits carried out as part of compliant pharmaceutical production.

3. Installation

We install your new test systems and validate these with customer-specific equipment qualification programmes (EQPac). This will ensure optimum test performance and proven reliability for you and your production operations.

4. Training

Experts will teach your employees to get the best out of your system. Our professional training sessions will familiarize your personnel with the equipment, in particular teaching them about correct operation and maintenance in line with your quality requirements.

6. Preventive Maintenance

Be prepared to avoid expensive downtime: regular maintenance will help prevent downtime, with multiple package options available for your individual maintenance programme, including telephone service assistance.

5. Spare Parts Delivery

Mechanical and electrical components wear out over time. We can, if you choose this option, remind you when it's time to make these necessary exchanges. By doing so, you can avoid any disruption and increase the reliability and availability of your system.

METTLER TOLEDO is a market leading innovator of automatic checkweighers and product inspection technology.

Our global network of industry experts create and supply reliable and sustainable solutions to meet the most stringent pharmaceutical requirements.

Our systems enable producers to observe the latest standards and regulations, whilst guaranteeing optimal product quality, process reliability and brand protection.



www.mt.com/checkweighing

For more information

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