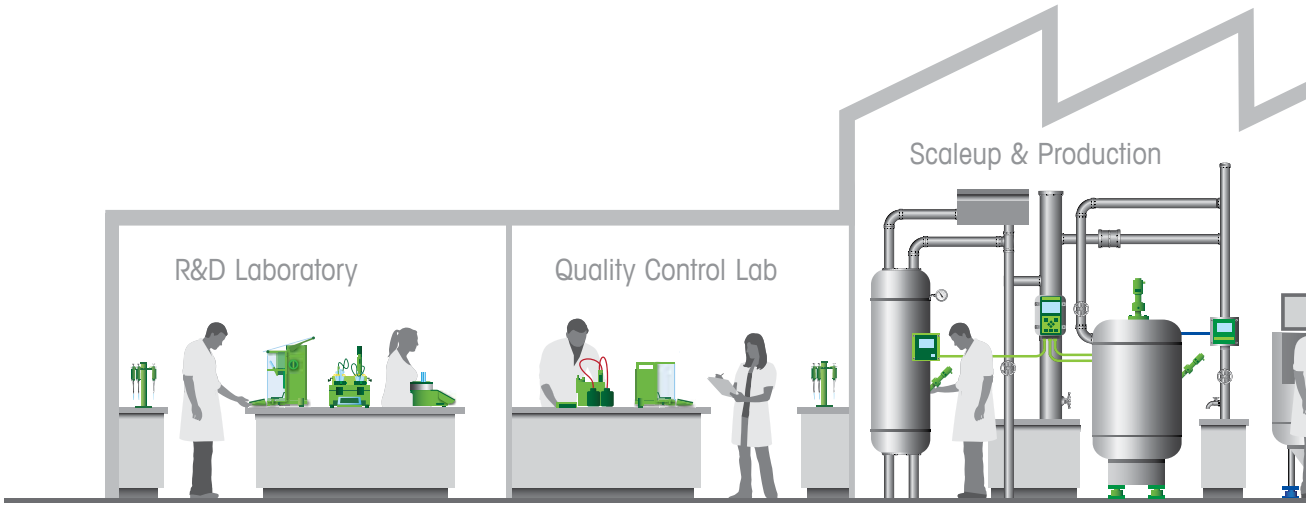
Solutions and Competencies

METTLER TOLEDO

Providing Solutions
Across our Customer's Value Chain



R&D Laboratory

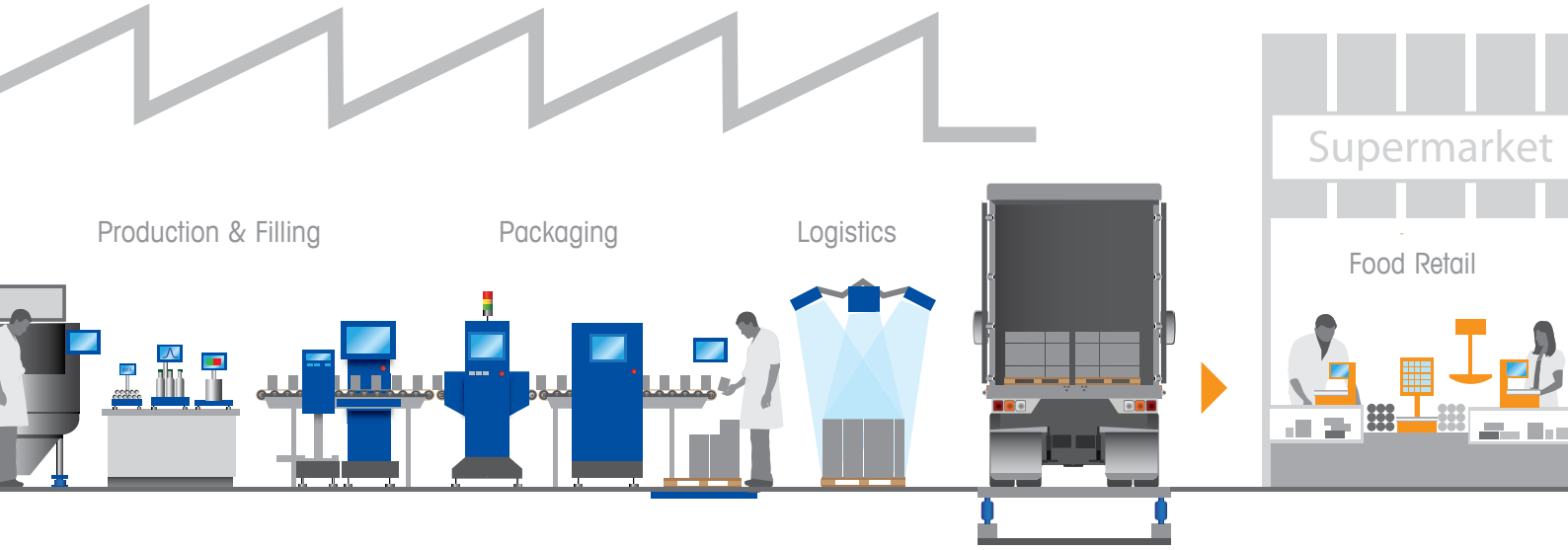
Our precise instruments are the foundation of research and quality control labs all over the world. High-performance weighing solutions offer a basis for solid R&D results. Pipettes are an essential tool for life science research. Thermal analysis instruments help to improve materials and their thermal behavior. Automated chemistry solutions accelerate the development of new chemicals.

Quality Control Lab

Quality control relies on fast and precise analytical measurement as well as good data management. Our analytical balances, titrators, pH meters, density meters, refractometers, melting point meters and pipettes can be tailored to each customer's application and provide a fully documented workflow for every quality control lab.

Scaleup & Production

Our sensors for measuring critical liquid analytical parameters, such as pH and oxygen levels, water conductivity and resistivity as well as total organic carbon, enable pharmaceutical, biotech and other companies to continuously ensure product quality and meet regulatory standards. Our transmitters and connectivity solutions make data collection and integration into control systems efficient and flexible.



Production & Filling

We offer industrial scales in all sizes and formats, terminals and software to control and monitor manufacturing processes. Specialized solutions for formulation, piece-counting and many other applications help to improve productivity and reduce errors.

Packaging

Product inspection solutions help to safeguard product quality, safety and integrity inside and out. Our systems for metal detection, check-weighing, x-ray and vision inspection provide confidence that product quality is maintained, compliance with industry standards is achieved and consumers and brands are protected.

Logistics

Our vehicle scale systems offer the highest level of accuracy and can prevent unexpected downtime thanks to a unique design and remote diagnostics capabilities. For express carriers, in-motion weighing, dimensioning and identification software solutions increase throughput and provide revenue recovery opportunities.

Food Retail

From retailers' receiving docks to their checkout counters, we enhance efficient handling of fresh goods with weighing, packaging, pricing, wrapping and labeling solutions. Internet-enabled scales greatly facilitate in-store marketing, fresh item management, promotions and more.

Innovative Analysis
for Research and Development

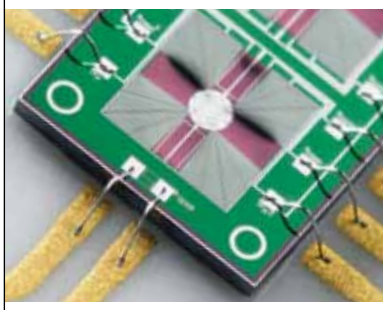
Pushing the boundaries of what's possible is essential for great new discoveries in research and development. METTLER TOLEDO does not only offer highest precision measurement tools, but also many new innovative techniques to speed up and facilitate research work. From ultra-fast materials analysis to highest-precision weighing to fully-automated organic synthesis and ergonomic liquid handling, we provide many essential lab tools for the modern scientist.

Chemical Synthesis and Reaction Analysis

Efficient organic synthesis with EasyMax and ReactIR

Our solutions enable innovation efforts in chemistry by helping scientists invent viable synthetic routes for new products. By quickly evaluating various potential routes, starting materials, building blocks, and reaction conditions, chemists can safely generate the desired quantity of the target compound.

Comprehensive Materials Characterization



High-performance thermal analysis with Flash DSC

We offer a wide spectrum of Thermal Analysis instruments to determine the characteristics of materials at different temperatures. The unique Flash DSC instrument can measure effects at extremly high heating rates of up to 2.4 Mio degrees per minute. The Flash DSC 1 is as a result the ideal tool for studying crystallization kinetics.

Ergonomic Manual Liquid Handling

LTS technology for effortless pipetting

Pipetting is one of the most repetitive tasks in the laboratory and can lead to fatigue and injuries. The patented LiteTouch system of our pipettes reduces the force needed to eject a pipette tip to a minimum and therefore makes pipetting much easier and prevents injuries.

R&D Laboratory Solutions

Analytical Balances
pH Meters
Pipettes
Thermal Analysis Instruments
Melting Point Analyzers
In-situ FTIR Reaction Analysis
Synthesis Workstations
Reaction Calorimeters

Automated
High-Precision Weighing

Ultra precise, fast weighing
Our analytical and micro balances offer unparalleled weighing performance with readability to as low as 0.0001 mg. The ability to weigh very small quantities can result in considerable cost savings when samples are very valuable.

www.mt.com/micro

Result Effectiveness for Quality Control

Getting reliable results efficiently is key for most quality labs. METTLER TOLEDO is not only focused on providing great results, but offers solutions which adapt perfectly to the customer's requirements, make operation easier and support full compliance with SOPs and regulations.

Fast and Reliable Weighing

ErgoClips and SmartGrid speed up the weighing process
Our analytical balances do not only offer highly reliable results, but really excel in smooth and safe operation: e.g. ErgoClips help to weigh in almost any shape of container; SmartSens allows the balance to be opened without touching the draft shield which prevents contamination; SmartGrid speeds up the weighing and facilitates cleaning of the balance.

Efficient Multi-Parameter Measurement

Smooth workflow for titration, density, refractometry, pH etc.
Often, multiple parameters of the same sample need to be determined. Our combined density and refractometry instruments fully integrate into our pH and titration solutions and therefore offer a fast and reliable workflow. The One Click user interface makes operation easier and reduces user interaction dramatically.

Full Data Transparency and Compliance

LabX software supports compliance and improves reporting
Our LabX instrument control software solution helps to keep track of all your methods/SOP and makes sure they are accurately executed on the different instruments. In addition, LabX fully supports compliance with regulations and offers comprehensive data analysis as well as fully flexible reporting.

Quality Control Lab Solutions

Automatic Titrators
Analytical Balances
Precision Balances
Density- and Refractometers
Moisture Analyzers
Melting/Dropping Point Analyzers
pH-Meters
Pipettes

One Click Automation

Increased productivity and simple workflows
Thanks to our One Click user interface and our modular automation solutions, titration can be automated to a very high degree. Ideally the only thing an operator has to do after placing the samples is to press one button.

▸ **www.mt.com/one-click-titration**

Analytical Flexibility for Production

METTLER TOLEDO develops and manufactures robust, high-performance solutions used for measurement and control in liquid industrial processes, gas phase applications and pure/ultrapure water applications.
Our systems cover a wide range of parameters, including pH, conductivity, dissolved and gaseous oxygen, and TOC. They feature intelligent sensor and transmitter solutions for improved productivity, process reliability and safety.

Liquid Process Analytics Solutions

Increased process uptime
In-line pH, oxygen, carbon dioxide, turbidity and conductivity sensors equipped with Intelligent Sensor Management (ISM) measure more accurately, communicate with transmitters more stably, and are tailorable to industry-specific requirements. In addition, ISM's predictive maintenance capabilities increase process uptime and yield.

Pure & Ultrapure Water Analytics Solutions

Ensuring water quality
In many pharmaceutical, power generation and microelectronics processes, water purity is vital. METTLER TOLEDO's portfolio of pH, oxygen, ozone, conductivity and total organic carbon sensors provide continuous, real-time water quality assurance to meet the strictest regulatory compliance.

Gas Analytics Solutions

Safety and process control
Gas sensing is essential in many processes to prevent explosions or product degradation. METTLER TOLEDO offers rugged, low-maintenance, in situ solutions that deliver high measurement performance and long-term stability.

Solutions for Scaleup and Production

Analytical In-line Sensors
Transmitters
Process Housings
Cleaning / Calibration Systems
System Integration

Intelligent Sensor Management and Multi-Parameter Transmitters

The future of measurement systems has arrived
Intelligent Sensor Management (ISM) was developed by METTLER TOLEDO to meet the requirements of customers for many years to come. ISM is a digital technology platform for sensors and transmitters that delivers performance, reliability and maintenance benefits not possible with non-ISM systems. Multi-parameter transmitters lower inventory and reduce training requirements by allowing the use of one transmitter model across all processes and parameters.

www.mt.com/pro

Comprehensive Weighing Solutions for Production and Filling

Industrial solutions and services from METTLER TOLEDO optimize operations from receiving to shipping, with solutions for production, end-of-line product inspection and logistics. We make sure that processes are optimized for maximum efficiency and reliability. Results include improved product quality, accelerated and automated processes, increased productivity and regulatory compliance.

Consistent Filling and Batching Solutions

Highest accuracy improves product quality
When filling intermediate bulk containers, drums or vials we provide fast, precise and repeatable results. Consistent mixtures, blend after blend, 24/7 with almost no downtime or shutdown. Batching solutions from METTLER TOLEDO guarantee consistent, fast mixtures. Their flexibility and scalability allow for adaptation to the continuously changing applications.

Hazardous and Compliant Weighing

Increase safety and productivity at the same time
Thanks to our hazardous area solutions, apparent contrasts turn into one set of standards. Our wide selection of intrinsically safe weighing systems embraces weiging solutions of any size, shape and capacity. In addition they comply with latest hygienic design guidelines and withstand harsh cleaning.

Weigh Modules and Load Cells

Easy integration together with high weighing performance
Load cells, weighing sensors and weigh modules are key components in industrial weighing solutions such as tank & silo weighing, conveyor weighing and process control. METTLER TOLEDO offers a full range of load cells, weigh modules, transmitters and terminals for basic scale applications up to high-speed, in-motion weighing, compliant with global quality & safety standards.

Production Solutions

Bench Scales
Compact Scales
Counting Scales
Floor, pallet, low-profile scales
Over-Under Checkweighers
Hazardous Area Solutions
Weigh Modules and Load Cells
Terminals / Indicators / Controllers

Industrial Scales

Improved product quality, increased productivity and regulatory compliance
With our strong focus on customer processes and applications we offer a wide variety of scales suitable for any industrial environment and application.

www.mt.com/industrial

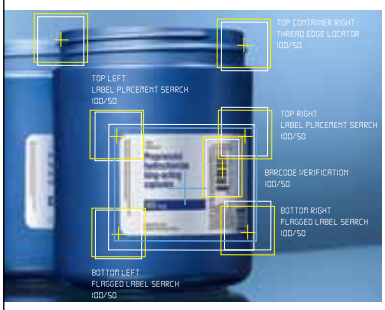
Guaranteed Product Safety for Packaging

METTLER TOLEDO provides stand-alone or fully-integrated product inspection systems to address the challenges of today's manufacturing requirements. Our solutions help to safeguard the quality, safety and integrity of products, inside and out.

Metal Detection and X-ray Inspection

Whether using metal detection or x-ray inspection technology, Safeline contaminant detection systems help to guarantee the safety of products.
X-ray inspection systems are also able to perform a range of in-line quality checks to ensure product and packaging integrity. Together they provide total product quality, inside and out.

Vision Inspection



Vision inspection systems ensure that products consistently meet manufacturers' exacting quality standards and specifications.
The CI-Vision systems enable the inspection of a wide variety of packaging and products to deliver perfect product presentation, every time.
In addition, we offer comprehensive solutions for serialization tasks and optical inspection equipment in pharmaceutical packaging lines.

Centralized Product Inspection Monitoring

The four dimensions of integrated Product Inspection Monitoring – productivity, product quality, security and clarity – come together in the ProdX software solution. Critical control points are under your full control, protecting the consumer and your reputation. ProdX constantly monitors performance, guaranteeing that your product inspection devices are working optimally and efficiently for longer every day.

Packaging Solutions

Metal Detection
X-ray Inspection
Checkweighing
Vision Inspection
Track & Trace
Serialisation

Checkweighing

Garvens checkweighing systems provide 100% quality control and therefore total peace of mind. Standard or highly-customized, these product inspection systems are built to suit each manufacturer's specific application and environment. They help to ensure that quality standards are met and compliance with industry regulations is achieved.

www.mt.com/pi

Fast and Reliable Measurement for Transport and Logistics

Speed, uptime and accuracy are essential to any terminal, warehouse or distribution operation. METTLER TOLEDO weighing, dimensioning and identification solutions are robust and precise in all conditions, providing maximum operational efficiency and read rate.

Inventory Control

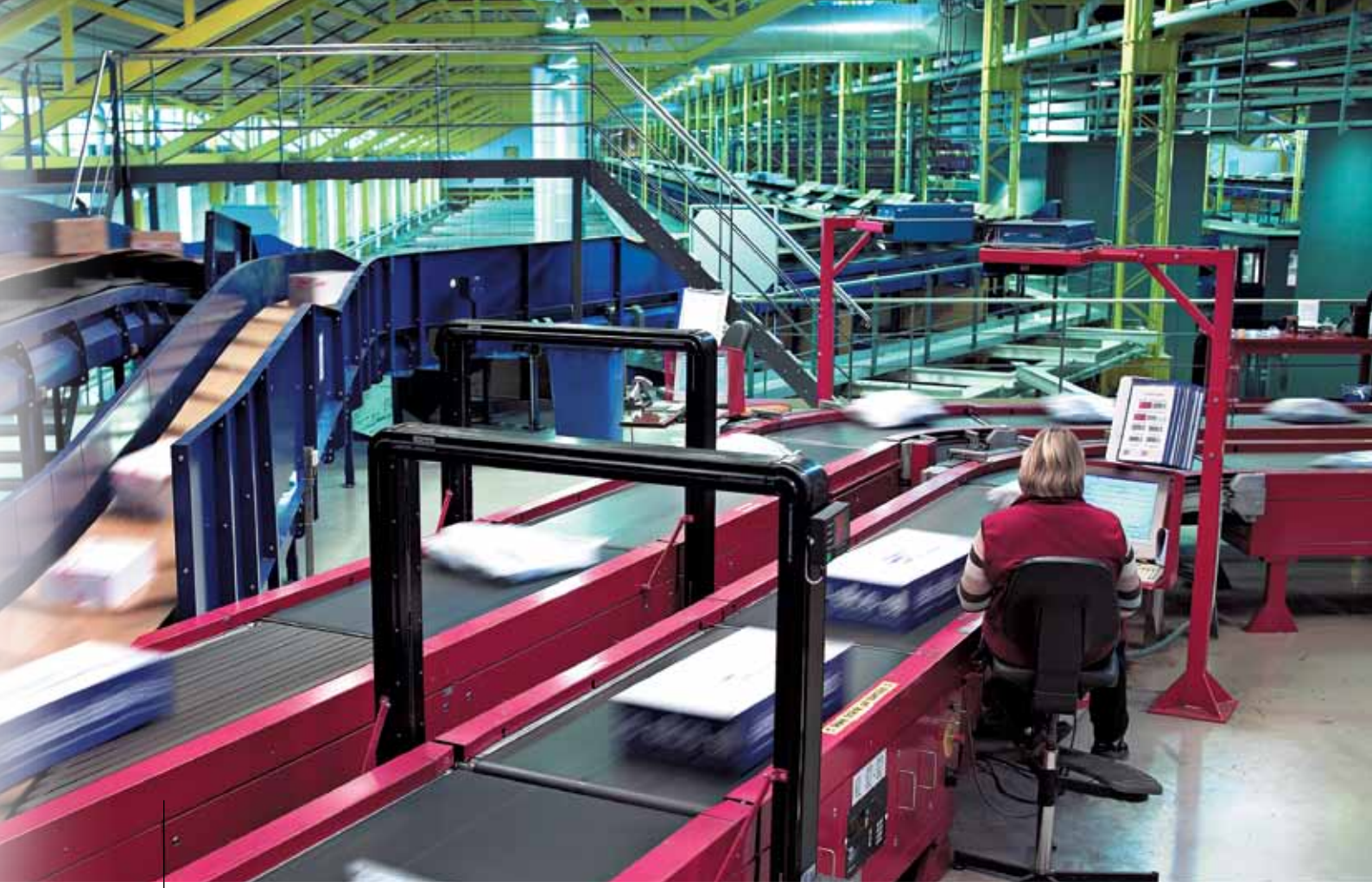
Traceable and safe
METTLER TOLEDO inventory control systems automatically collect dimensions, weight and ID of all objects, for full stock control at all stages of the supply chain. Weighing is also a very accurate inventory control for tanks, silos and hoppers. It is independent of tank shape and perfect for non-self-leveling material. The weigh modules are outside of the tank and don't come into contact with the aggressive, hazardous or hot material stored inside.

Fast and Accurate Measurements

Protect your revenue
A complete data profile is key to optimizing terminal efficiency and profitability. METTLER TOLEDO's dimensioning, weighing and identification solutions provide accurate measurements on any shape, size or surface for highest possible read rate and maximum revenue recovery.

Increased Uptime

Accurate and reliable
Unplanned downtime and weighing errors are often expected for truck scales in difficult environments. However, our POWERCELL® PDX load cell network removes the most common causes of downtime and scale errors. This unique technology can help maintain a company's productivity performance while also ensuring accuracy to protect profit margins.



Transport & Logistics Solutions

Forklift Scales
Truck Scales
Rail Scales
Air Cargo Scales
Postal Applications
Pallet/Parcel Dimensioning
Inventory Management Systems

Dimensioning, Weighing and Identification

Dimensions, Weight and ID in one go
Weight, dimensions and ID are the basic parameters for planning and invoicing in the transport and logistics industry. Our solutions increase automation, improving productivity, accuracy and ultimately profit. All our systems are Weights and Measures approved, guaranteeing maximum revenue protection and ensured customer trust.

www.mt.com/transport

Integrated Solutions
for Food Retail

Fresh food items are increasingly becoming a critical success factor for food retailers, and are a key tool in creating customer loyalty. Offering seamless integration into ERP systems, rapid service processes and a platform for innovative promotional concepts, our future-proof weighing solutions will put you on a path to sustainable fresh food success.

Pre-packing and Labeling

Flexible. Simple. Effective. From straightforward manual equipment to highly-automated solutions, we enable you to pack and label your fresh food products quickly and easily. And you can demonstrate your commitment to sustainability too, thanks to our 'Labeling Green' concept.

Fresh Weighing

Ergonomic. Robust. Innovative. The ideal weighing device for every application and every kind of fresh product – from meat and fish to fruit and vegetables. You can depend on the support of our wide range of scales, offering tactile and touchscreen operation, both at the fresh food counter and in self-service areas.

Checkout Weighing

Efficient. Customer-focused. User-friendly. Our checkout scales and point-of-sale displays meet the highest demands of the all-important checkout area. For rapid weighing and POS throughput, without queues.

Solutions for Food Retail

Price labeling
Packaging system
Wrappers
Counter scales
Self-service scales
Checkout scales
Basic scales

Contextual Marketing at Your Shop

Visual Merchandising
Reinforce brands. Appeal to emotions. Maximize sales. Capture your customers' attention at the very moment that they are making their purchasing decisions – on the screens of your counter and self-service scales, thanks to our digital signage application.

www.mt.com/retail

Knowledge and Tools
for Effective Solutions

METTLER TOLEDO provides a wealth of free tools and documentation about the latest techniques, how to optimize applications and for training. Our Website www.mt.com is a great resource for know-how and best practice.

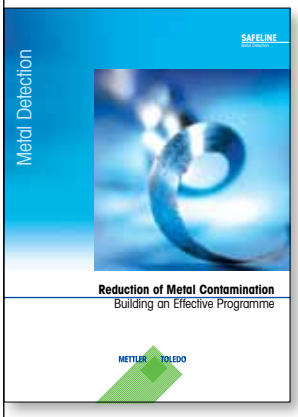
Application Literature

We offer comprehensive application support for all our solutions. E.g. our titration application database alone holds over 300 applications for all relevant industry segments.

e.g. Titration applications:
▸ **www.mt.com/titration_applications**

e.g. Moisture applications:
▸ **www.mt.com/moisture**

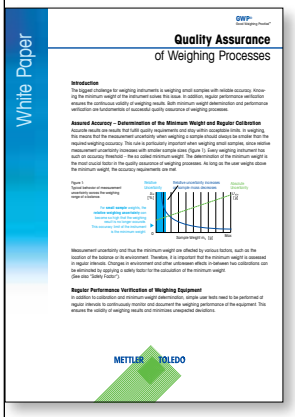
Technology Guides



Our authoritative guides provide industry best practice in key areas for process improvement and helps to take informed decisions.

e.g. Metal Detection Guide
▸ **www.mt.com/pi-guides**

White Papers



A growing number of white papers document innovative solutions from chemistry R&D to productivity improvement in formulation processes.

Webinars

METTLER TOLEDO offers a wide range of webinars on about various topics from process optimization applications to advanced techniques, including presentations from academic and industry-leading experts. We offer live webinars as well as on-demand webinars which can be viewed immediately.

METTLER TOLEDO Webinar portal:
www.mt.com/webinars

Case Studies, Applications and More

Regular customer information

We regularly publish newsletters for all major industry segments as well as for specific topics such as analytical chemistry or materials characterization. Free subscription is available at the webpage listed below.

www.mt.com/segmentnews

Services for Uptime,
Performance, Compliance & Expertise

The METTLER TOLEDO service team knows how to satisfy your business needs by getting the best from your instrumentation and equipment. Take advantage of the experience, skills and thorough know-how of our far-reaching team of thousands of dedicated service specialists all around the world and, much more importantly, in your immediate vicinity.

Our service offering ensures optimal equipment uptime, performance, compliance and the expertise necessary to maximize your investment.

Uptime

Profit from maximum uptime for your equipment and processes, receiving support whenever and wherever you need it:

- On-site and depot repair
- Wear and tear parts
- Spare parts and kits
- Refurbishment
- Remote monitoring and diagnostics

Performance

Realize highly accurate and precise results from your processes by optimizing equipment performance in all environments:

- Qualified Installation
- Setup and Configuration
- Preventive Maintenance
- Software Maintenance
- Instrument and Process Optimization
- Application Support

Compliance

Get peace of mind in complying with regulations and norms and with results that meet requirements every time:

- Calibration and Certificates
- Legal Verification
- Weights and Measures Support
- Qualification and Validation
- Documentation and Testing

Expertise

Ensure highest efficiency and expertise of your workforce through training and seminars tailored to your needs:

- Basic User and Technical Training
- Advanced Application Training
- Consulting and Customization
- System and Process Integration
- Expert Seminars
- Literature and Downloads

Measuring Practices

Optimal service throughout the solution lifecycle
Our Good Measuring Practices (GP) like Good Weighing Practice (GWP®) help our customers to optimize their results while keeping cost at a minimum. GP offers a set of tailored services from systematic and efficient product evaluation to professional installation, appropriate calibration and highly-optimized routine use.

www.mt.com/GP

Global Presence with Field Support & Service

When it comes to instrumentation you need a powerful partner. One who has the strength and know-how in R&D to develop products that add true value to your processes. One who not only has a truly global presence to serve you even in the most remote global locations, but can provide you with application support and technical assistance, any time and anywhere.

Large, highly experienced support force

We serve our customers worldwide with one of the largest sales and service networks in the industry. Over 5,000 factory-trained specialists in sales, application support and technical service are on-hand to assist you in increasing the efficiency, cost-effectiveness, safety and reliability of your operational processes. The local teams are able to maintain close relationships with users; they have the flexibility to adapt support and service in line with different user requirements.

Over
5000
factory trained service and sales specialists worldwide

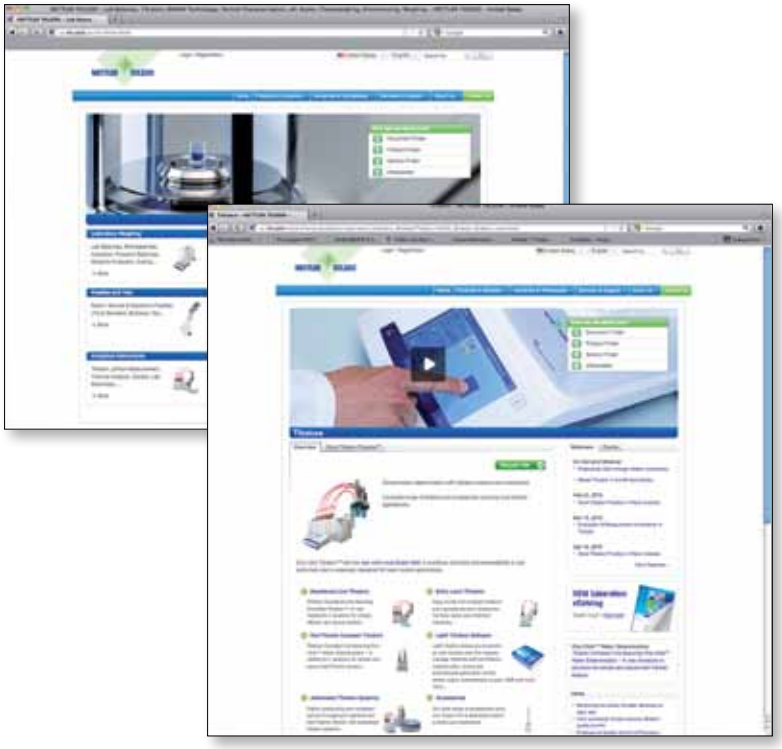
METTLER TOLEDO has its own Sales & Service Organizations in 35 countries as well as Distribution & Service Partners in most other countries across the globe.
Products are developed and produced in various locations in the United States, Europe and China.

Global presence

With our own market organizations operating in most industrialized countries as well as selected partners in other regions, we are ready to serve customers well around the globe. In total our products and services are available in over 100 countries. Our geographically-focused market organizations are responsible for all aspects of sales, service and support.

METTLER TOLEDO sales & service locations
www.mt.com/global-presence

Access Information and Know-How
On www.mt.com



Learn more about how we can assist you by visiting our global website. View up-to-the-minute product and application information, order the full catalog or request quotes for sales assistance.

See for yourself how we can add value to your business.

www.mt.com

For more information

Mettler-Toledo International Inc.
CH-8606 Greifensee, Switzerland
Tel. +41 44 944 22 11
Fax +41 44 944 30 60

Subject to technical changes
© 03/2012 Mettler-Toledo AG
Printed in Switzerland