Industrial Weighing

- Weighing Terminals
- Software & Services
- Compact & Special Scales
- Weights & Accessories
- Weigh Modules & Load Cells
- Vehicle Scales
- Weighing Platforms
- Parcel & Pallet Weighing, Dimensioning & Scanning

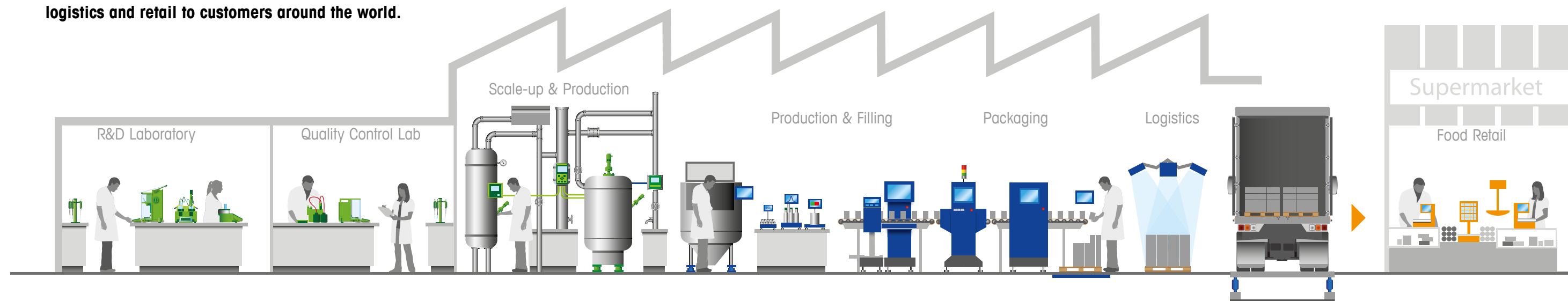# Weighing and Measuring
Competence for Your Industry

METTLER TOLEDO

Providing Measurement Solutions
Across Our Customer's Value Chain

In addition to the industrial weighing solutions found in this catalog, we offer precision instruments and services for many applications in research and development, quality control, production, logistics and retail to customers around the world.

Scale-up & Production

R&D Laboratory Quality Control Lab Production & Filling Packaging Logistics

Supermarket

Food Retail

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.

Scale-Up & 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. We also offer 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 safeguard product quality, safety and integrity, inside and out. Our systems for metal detection, checkweighing, 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.

Check Our Solutions:
▶ **www.mt.com**

Weigh Modules

WMF
Next generation in automated precision weighing with integrated Industrial Ethernet
Page 170

WKC
Fully integrated compact solution for most economical and high-performance on-board weighing
Page 172

POWERCELL® GDD® Load Cell
Vehicle load cells with superior accuracy and reliability
Page 193

Parcel & Pallet Weighing and Dimensioning

CSN840 Pallet
Profitable pallet handling through robust measuring capabilities
Page 202

VFS120 Forklift Scale
Rugged forklift scales built to last
Page 116

Platform Scales

PBK9 & PFK9 Platform Scales Series
For high precision in any environment

Pages 76, 78 and 96

Pages 108 and 180

A Choice of New Products
For Industrial Applications

Terminals

IND570 / IND890
Flexibility to drive productivity
Page 18

Page 26

Transmitter

ACT350 High Speed PLC Connectivity
Easy setup and monitoring
Page 44

Our Solution
For Your Production

Terminals for Bench and Floor Scales
Flexible and Accurate

**To maximize overall equipment effectiveness, it is critical to use a terminal with application flexibility that allows the weighing system to be easily integrated into your overall manufacturing operation. Our weighing terminals are designed for use with bench and floor scales so you get a maximum return on your weighing-equipment investment.**

▸ **www.mt.com/ind-bench-floor**

Many bench scales are used in manual working environments in which equipment ergonomics and ease of use impact operational productivity and quality. The terminals' vivid color HMI, multi-lingual operator messages, configuration menu and responsive tactile keys maximize operator efficiency.
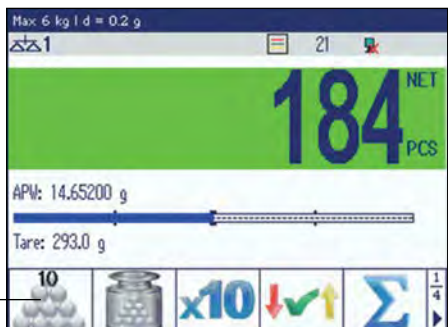
Added Capabilities with Peripheral Devices and Systems

For many weighing applications, the process involves capturing data and integrating it into the weighing record, plus sending transaction information to a PC or printer. The weighing terminal software and communication interface must be capable of connecting to barcode scanners, external keyboards, remote displays and other devices. Our family of weighing terminals helps you create a well-integrated weighing system within your manufacturing operation.

Compact Design
For weighing various-sized items on a compact bench scale, a terminal mounted to the front of the scale platform provides good visibility of weight values.
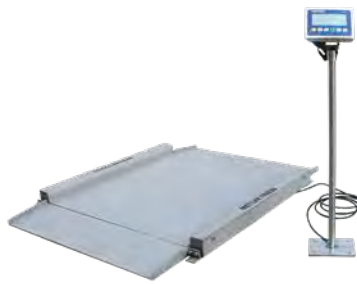
Analog or Digital Scale Bases
Our terminals provide an interface to both analog and digital bases, allowing for flexibility based on accuracy or other performance requirements.

Operational Insight
Asset management and weighing performance is recorded and can be exported for analysis and mitigation actions.

DatabICS
Scale-Management Software
• Manage all scales from one PC
• Back-up/restore
• Manage scale database
• Save weighing data
• Create labels

Collect+ Software
• Visualize weighing and production data
• Monitor production output
• See counting efficiency, filling accuracy and giveaway

Barcode Scanner
• Scan orders and recall articles
• Identify operators
• Start weighing with a scan

Printer
• PC not necessary at every weighing station
• Immediately create labels with scale

Data Transfer
• Use USB as alternative data-transfer method
• Alternatively, use Ethernet or USB as data transfer method or WLAN for mobile solutions

Terminals for Bench and Floor Scales
Provide Enhanced Weighing Productivity

The weighing terminal is an important part of a complete weighing solution. These terminals are operator-friendly and designed for a variety of bench, compact and floor-scale applications.

▶ **www.mt.com/ind-bench-floor**

	IND890	**ICS6__**	**ICS4__**	**IND246**	**IND231/236**
	Multi-scale connectivity with 10" or 15" touchscreen HMI.	Premium weighing terminal for sophisticated applications.	Advanced weighing terminal for challenging applications.	Basic weighing plus multiple application software apps included.	Cost-effective weighing terminal with no compromise in performance.
Applications	• Basic weighing • Over/under checkweighing • Visual studio custom programmable	• Intuitive counting and totalizing • Smart checkweighing & portioning • Fast classifying and average weighing	• Accurate counting and totalizing • Advanced checkweighing and portioning • Fast average weighing	• Basic weighing • Simple over/under checkweighing • Simple counting	• Basic weighing • Simple over/under checkweighing • Simple counting
Versatility	★★★★ Multi-scale with flexible configuration per scale	★★★★ Multiple advanced applications software included	★★★☆ Multiple application software included	★★☆☆ Multiple application software included	★★☆☆ Multiple application software included
Process Integration	★★★☆ Serial, Ethernet TCP/IP, USB, DIO	★★★★ Serial, Ethernet TCP/IP, USB, DIO, WLAN	★★★☆ Serial, Ethernet TCP/IP, USB, DIO, WLAN	★★☆☆ Serial, Ethernet TCP/IP, USB, DIO	★☆☆☆ Serial, USB, DIO
Data Management	★★★★ Upgrade ready RFID solution	★★★☆ Database stores up to 5,000 articles, csv transaction and table file export	★★★☆ Database stores up to 100 articles, csv transaction and table file export	★★☆☆ Csv transaction and table file export	★☆☆☆ 5 pre-defined print templates
Compliance Support	★★★☆ Easy to use	★★★☆ Alibi memory and user management functionality	★★☆☆ Alibi memory and user prompting functionality	★★☆☆ Scale statistics, logs, password	★☆☆☆ Password protection
Performance Optimization	★★★☆ Automated modeling External unit	★★★★ Versatile HMI with softkeys, templates and transaction Memory	★★★☆ Versatile HMI with softkeys and templates	★★☆☆ Quick navigation, pre-configured templates, SD memory card	★★☆☆ Simple navigation
Display	10", 15", or 19" active TFT color LCD with backlight	Graphic LCD display with 3 display layouts, colorWeight® functionality	Color TFT (320x240) with 3 display layouts, colorWeight® functionality	240 x 96 backlit transflective graphic LCD	Bright, 40 mm height weight display
Keypad	Resistive touchscreen, function keys on 15" and 19" HMI	Tactile with 4 x assignable softkeys, scale function keys, and alphanumeric keys	Tactile with 4 x assignable softkeys, scale function keys and numeric keys	Tactile with 1 x assignable function key and alphanumeric keys	Tactile with 2 x assignable function keys
Scale Interface	4 x analog, SICSpro digital, or SICS Lab balance and APW interface	4 x analog or SICSpro digital	2 x analog or SICSpro digital	1 x analog scale, up to 10 x 350 ohm or 1 x POWERCELL®, up to 12 POWERCELL® load cells	1 x analog scale, up to 4 x 350 ohm
Communication Interface	Standard Ethernet TCP/IP, USB host and optional RS232/422/485, USB device, DIO	1 x RS232 standard & 3 optional, RS232, RS422/485, USB device, USB host, Ethernet, WLAN, Digital I/O	1 x RS232 standard & 1 optional RS232, RS422/485, USB device, USB host, Ethernet, WLAN, Digital I/O	1 x standard RS232/422/485 and optional USB device, 1 x optional RS232/485, Ethernet TCP/IP, DIO	1 x RS232 standard and optional USB device, 1 x optional RS232/422/485, DIO
Housing	Stainless steel	Stainless steel or aluminium die-cast	Stainless steel or aluminium die-cast	Stainless steel	Polymer or stainless steel
IP Protection	IP69k	IP54, IP65, IP67, IP69k	IP54; IP65, IP67, IP69k	IP66	IP54 (polymer) or IP66/67 (stainless steel)
Power	100–240 VAC	90–240 AC or rechargeable battery	90–240 AC or rechargeable battery	100–240 VAC or rechargeable battery	100–240 VAC or rechargeable battery
Software Applications	Animal weighing, checkweighing, accumulation, custom programs	Counting, checkweighing, totalizing, average weighing, accumulation	Counting, checkweighing, totalizing, average weighing, accumulation	Animal weighing, counting, peak weight, checkweighing, vehicle, accumulation	Animal weighing, counting, checkweighing, accumulation, remote display mode
More Information	**www.mt.com/IND890**	**www.mt.com/ICS6**	**www.mt.com/ICS4**	**www.mt.com/IND246**	**www.mt.com/IND231-236**

Requirement fulfillment scoring: ★★★★ very good   ★★★☆ good   ★★☆☆ fair   ★☆☆☆ limited   ☆☆☆☆ none

Tank- and Hopper-Scale Terminals
Simple Integration and Monitoring

Tank, silo and machine-builder weighing applications require the ability to reliably and accurately interface weighing terminals with automation, material-requirements planning and manufacturing execution systems. Applications range from simple weight-data transfer to a plant network to complete control over a part of the manufacturing process via the weighing terminal. With our broad range of terminals, you can select the solution that fits your needs exactly.

▶ **www.mt.com/ind-tank-silo-hopper**

Typical applications include filling, dosing or blending of liquids or solid materials, batching or formulation of multiple ingredients and management of raw-material inventory levels. Whether the control of material transfer is managed by the weighing terminal or an automation controller, a rugged, accurate and reliable terminal is critical for success.

Easy Integration
Support for multiple fieldbus protocols, sample PLC interface code and extensive product documentation speeds up and simplify integration.

Advanced Diagnostics & Alarms
The POWERCELL® load-cell network helps pinpoint and communicate locally or remotely any weighing-system disturbances that could comprise weighing accuracy.

Operational Insight
Asset management and weighing performance is recorded and can be exported for analysis and mitigation actions.

Many Styles, Approvals and Technologies

Whether connecting to a single or multiple scale, analog or POWERCELL® technology, it's easy to find a METTLER TOLEDO weighing terminal that fits into your production process. With models available for mounting on a wall or column, or with a panel mount and DIN-rail mounting system, the fit into your machine and process is right for your needs. Our models, with global hazardous-area and weights-and-measures approvals, help ensure that local regulations are met. Multi-lingual product documentation and terminal user interface messages speed up installation and training while increasing operator performance.

Our family of weighing terminals provides capabilities that help you create a well-integrated weighing system within your manufacturing operation.

Tank- and Hopper-Scale Terminals
From Small to Large, Simple to Complex

A variety of scale solutions for tanks, silos, bins, hoppers and conveyors provide accurate, reliable and flexible integration into your manufacturing process.

▶ **www.mt.com/ind-tank-silo-hopper**

The Best Fit Simplifies Terminal Installation

Watch the video to learn how various IND131/331 terminal enclosure choices integrate with your diverse applications:

▶ **www.mt.com/IND131-331-simplifies-installation-video**

	IND780	IND570	IND331	IND131
	Power and performance for advanced weighing applications.	Performance and versatility, delivered.	Rugged panel-mount automation interface.	Compact DIN-rail mounting, with automation interface.
Applications	• Basic weighing • Filling, dosing, blending • Batching and formulation	• Basic weighing • Filling, dosing, blending • Bulk-material handling	• Basic weighing • Filling and dosing • Bulk-material handling	• Basic weighing • Filling and dosing • Bulk-material handling
Versatility	★★★☆ Multi-scale with flexible configuration	★★★☆ Powerful application software	★★☆☆ Multiple housing styles	★★☆☆ Multiple housing styles
Process Integration	★★★★ Advanced Fieldbus, serial, Ethernet TCP/IP	★★★☆ Fieldbus, serial, Ethernet TCP/IP	★★☆☆ Mulitple fieldbus interface options	★★☆☆ Mulitple fieldbus interface options
Data Management	★★★★ Barcode data integration, tables, SQL interface	★★★☆ Barcode data integration, multiple tables, reports	★☆☆☆ Simple filling control	★☆☆☆ Simple filling control
Compliance Support	★★★☆ Zone 2/22 and Division 2, track-and-trace capabilities, logs	★★★☆ Zone 2/22 and Division 2, track-and-trace capabilities, logs	★★☆☆ Zone 2/22 and Dvision 2 Hazardous optional	★★☆☆ Zone 2/22 and Dvision 2 Hazardous optional
Performance Optimization	★★★★ Advanced calibration, predictive diagnostics	★★★★ Advanced calibration, diagnostics, GWP	★★☆☆ CalFREE calibration without test weights	★★☆☆ CalFREE calibration without test weights
Display	Graphic QVGA backlit color TFT	High-contrast, high-resolution graphic OLED 25 mm-high weight indicator	Graphical OLED	Graphical OLED
Scale Interface	4 scale, analog or digital, sum scale, pulse counter	1 scale, 12 x 350 ohm load cells or digital	1 scale, up to 8 x 350 ohm analog load cells	1 scale, up to 8 x 350 analog ohm load cells
Communication Interface	2 x Standard RS232/422/485 USB host, 2 x Optional RS232485, Ethernet TCP/IP EtherNet/IP, Profibus DP Modbus TCP, DeviceNet, ControlNet Analog Output, DIO	1 x Standard RS232/422/485 + USB host, 2 x Optional RS232485, Ethernet TCP/IP EtherNet/IP, Profibus DP Modbus TCP, DeviceNet, ControlNet Analog Output, DIO	1 x Standard RS232, 1 x Optional RS232/485, EtherNet/IP, Profibus DP Modbus TCP, DeviceNet, CC-Link Analog Output, DIO, AB-RIO, ControlNet	1 x Standard RS232, 1 x Optional RS232/485, EtherNet/IP, Profibus DP Modbus TCP, DeviceNet, CC-Link, Analog Output, DIO, AB-RIO, ControlNet
Housing	Panel or wall mount	Panel or wall mount	Panel or wall mount	DIN-rail mount or Junction Box
Power	85–264 VAC	85–264 VAC or 24 VDC	85–264 VAC or 24 VDC	85–264 VAC or 24 VDC
Software Applications	Filling, formulation, batching, customization	Filling, dosing, blending, customization	Simple material transfer with I/O	Simple material transfer with I/O
More Information	**www.mt.com/IND780**	**www.mt.com/IND570**	**www.mt.com/IND331**	**www.mt.com/IND131**

Requirement fulfillment scoring: ★★★★ very good ★★★☆ good ★★☆☆ fair ★☆☆☆ limited ☆☆☆☆ none
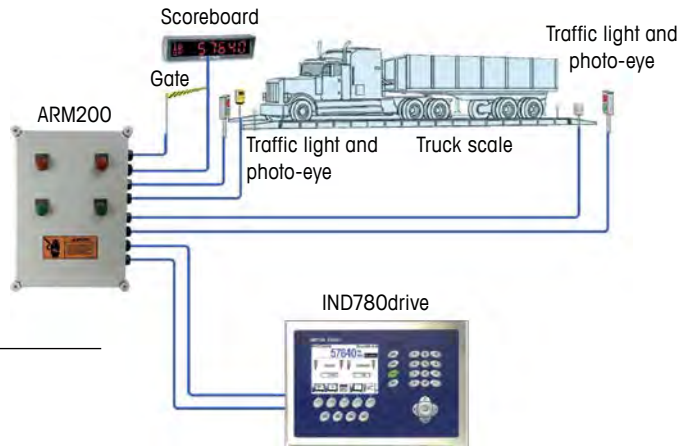
Vehicle-Weighing Terminals
Control Your Weighing Process

Maximizing your operational performance requires a weighing system that provides accurate, reliable and easy-to-understand information from your vehicle scale. While the vehicle scale itself is the foundation of your weighing system, without a high-performance weighing terminal, you cannot maximize efficiency in your operations that depend on vehicle-weight data.
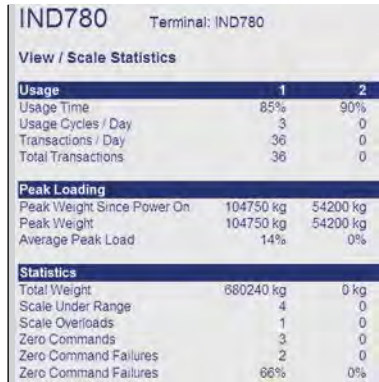
▸ **www.mt.com/ind-vehicle**

Vehicle-management software with databases of stored truck information and control over gates and loops provides increased productivity and improves the utilization of a vehicle scale. On-board data storage makes reporting easy. Efficient file export and flexible communication simplify data export to higher-level operations and software applications.

Scoreboard

Gate

ARM200

Traffic light and photo-eye

Truck scale

Traffic light and photo-eye

IND780drive

Interface with POWERCELL® PDX®

The power and flexibility of METTLER TOLEDO scale terminals enable them to be successful in the most demanding vehicle-weighing applications. The latest-generation POWERCELL® PDX® load cell provides protection beyond traditional analog load cells, securing both the integrity of your process and your profits. Accurate vehicle scale weights are ensured, day in and day out, under the most severe operating conditions, with predictive diagnostics constantly monitoring your scale and minimizing downtime costs.

POWERCELL PDX networks guard against failure by monitoring, logging and proactively notifying users on a variety of factors that can affect system integrity.

Protection from Environmental Influences
Lightning-strike resistant electronics and an EMI-protected digital signal to all load cells ensure reliability.

Advanced Diagnostics and Alarms
The POWERCELL® load-cell network helps pinpoint and communicate (locally or remotely) weighing-system disturbances that could compromise weighing accuracy.

Operational Insight
Asset management and weighing performance is recorded and can be exported for analysis and mitigation actions.

Vehicle-Weighing Terminals
Drive Your Business

The weighing terminal is an important part a complete truck-scale solution. Our range of terminals provides you with a variety of solutions to perfectly fit your application needs.

▸ **www.mt.com/ind-vehicle**

InTouch^{SM} Remote Services

InTouch Remote Services' remote diagnostic intervention enables increased scale uptime.

▸ **www.mt.com/ind-intouch-remote**

	IND780	IND570	IND246
	Power and performance for advanced weighing applications with advanced vehicle-weighing possibilities.	High performance, versatility, and easy configurability for vehicle applications.	Reliable operation with easy-to-learn functionality for vehicle weighing.
Applications	• Advanced on-board vehicle software • Advanced database functions • Multi-scale applications	• Vehicle management with simple gate control • Advanced Ethernet TCP/IP functions • Advanced asset management	• Simple inbound/outbound weighing • Transaction data export via PC utility • Interface to PC-based truck-scale software
Versatility	★★★★ Multi-scale with flexible configuration per scale	★★★★ Basic and advanced vehicle software, filling software, programmable	★★☆☆ Analog or POWERCELL® models, vehicle software
Process Integration	★★★★ Advanced fieldbus, serial, Ethernet TCP/IP, DIO	★★★★ Fieldbus, serial, Ethernet TCP/IP, DIO	★★☆☆ Serial, Ethernet TCP/IP, DIO
Data Management	★★★★ Barcode data integration tables, SQL interface	★★★☆ Barcode input, ftp and USB file import/export, tables, reports	★★☆☆ .csv transaction and table file export
Compliance Support	★★★☆ Zone 2/22 and Division 2 track-and-trace logs	★★★☆ Zone 2/22 and Division 2 track-and-trace logs	★☆☆☆ Basic track-and-trace logs
Performance Optimization	★★★☆ Lightning protection, basic diagnostics, unattended applications	★★★☆ Lightning protection, local and remote diagnostics, unattended applications	★★☆☆ Lightning protection, basic diagnostics
Display	Graphic QVGA backlit color TFT	High-contrast, high-resolution graphic, OLED 25mm-high weight indicator	240 x 96 backlit graphic LCD
External QWERTY Keyboard Interface	Yes	Yes	No
Scale Interface®	POWERCELL® or analog	POWERCELL® or analog	POWERCELL® or analog
Max. Number of Load Cells	350 ohm analog: 24 (12 per channel), POWERCELL PDX and MTX: 14 (24 with optional external power supply)	350 ohm analog: 12, POWERCELL PDX: 12	350 ohm analog: 10, POWERCELL PDX or GDD: 12
Max. Number of Scale Channels	4	1	1
Communication Interface	2 x Standard RS232/422/485 USB host, 2 x Optional RS232485, Ethernet TCP/IP, EtherNet/IP, Profibus DP, PROFINET, Modbus TCP, DeviceNet, ControlNet Analog Output, DIO	(Analog) 1 x (POWERCELL) 2 x Standard RS232/422/485 USB host, 2 x Optional RS232/422/485, Ethernet TCP/IP, EtherNet/IP, Profibus DP, PROFINET, Modbus TCP, DeviceNet, ControlNet, Analog Output, DIO	1 x Standard RS232/422/485 and optional USB device, 1 x optional RS232/485, Ethernet TCP/IP, DIO
Power	85–264 VAC	85–264 VAC, 24 VDC available in panel-mount models	85–264 VAC
More Information	**www.mt.com/IND780**	**www.mt.com/IND570**	**www.mt.com/IND246**

Requirement fulfillment scoring: ★★★★ very good   ★★★☆ good   ★★☆☆ fair   ★☆☆☆ limited   ☆☆☆☆ none

Custom Programmable Terminals
A Tailored Solution

METTLER TOLEDO channel partners have the weighing expertise and local support capabilities to provide a complete weighing solution. Depending on your process, it can be beneficial to customize the application software running on the weighing terminal. Several of our terminals have the ability to run customized software, optimizing your manufacturing operations.

▸ **www.mt.com/ind-programmable**

The right software architecture ensures that weighing functionality is not affected when custom programs are used with our programmable weighing terminals. Our terminals also provide powerful standard software functionality so the customized solutions benefit from the many core functions that exist in the terminal.
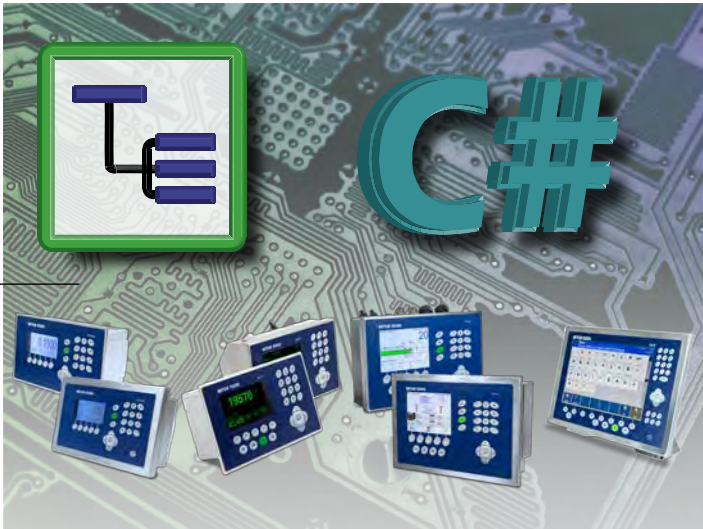
Powerful Data Interface
SQL data replication functions are supported, allowing for syncing between terminal and external databases.

HMI Customization
Touch and non-touch color HMI with a broad variety of intuitive icons provide a rich canvas on the user interface.

Flexible Connectivity
Data interface to peripheral devices, automation and plant networks can be managed via a variety of serial and Ethernet-based connections.

Integrate with PC or PLC-based Applications

While standard weighing terminal software manages data interfaces in a flexible way, there are many applications that could benefit from modifying the terminal HMI information layout and database format. The ability to export to an external database or guide an operator through a complex operation via a sequence of manual and automated actions is also desirable.

The secure, stable, documented and supported METTLER TOLEDO terminal software customization tools, such as Visual Studio, provide programmers with a solid toolset from which to create their applications. Additionally, program files can be backed up, archived or shared via standard methods.
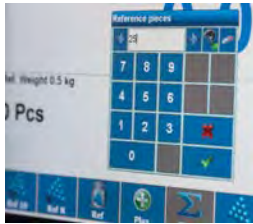
Custom Programmable Terminals
A Perfect Fit within Your Process

Advanced weighing applications often can be made more efficient with a custom-programmed terminal that provides a tightly integrated and powerful system. We offer a range of programmable weighing terminals from which to select the most suitable solution.

Programmable Terminals

Programmable terminals make unique applications easily customizable. For more information, visit:

▶ **www.mt.com/ind890-ma**

▶ **www.mt.com/ind-programmable**

	IND890	IND780	IND570
	Multi-scale connectivity with 10- or 15-inch touchscreen HMI.	Multi-scale connectivity with outstanding connectivity to automation equipment.	Flexible terminal with many advanced weighing features.
Applications	• Custom filling, dosing or blending • Custom counting • Custom workflow	• Custom filling, dosing or blending • Custom vehicle weighing • Custom workflow	• Custom filling, dosing or blending • Custom vehicle weighing • Custom workflow
Versatility	★★★★ Multi-scale, multiple fonts and colors	★★★★ Multiple fonts, colors and program objects to choose from via the programming tool	★★★☆ Multiple fonts, and program objects to choose from via the programming tool
Process Integration	★★★☆ Serial, Ethernet TCP/IP, USB, DIO	★★★★ Serial, Ethernet TCP/IP, USB, DIO, pulse counter, clustering of multiple terminals	★★★☆ Serial, Ethernet TCP/IP, USB, DIO
Data Management	★★★★ Ethernet, FTP and table management; most functions available in MS Visual Studio	★★★★ Ethernet, FTP and email functions; file replication, PC app call-backs, table management	★★★☆ Ethernet, FTP and email functions; file replication, PC app call-backs, table management
Compliance Support	★★★☆ Asset identification, multi-level password protection	★★★☆ Asset identification, multi-level password protection, track-and-trace logs	★★★☆ Asset identification, password protection, GWP, track-and-trace logs
Performance Optimization	★★★☆ Intuitive touch-based HMI with graphical icons, multi-lingual	★★★★ Integration with external SQL databases via remote data access	★★★☆ Customization of HMI, control DIO, create custom workflow with prompting
Display	10", 15", or 19" active TFT color LCD with backlight	320 x 240 pixel backlit, active TFT, color LCD	256 x 128 dot OLED monochrome graphic LCD
Keypad	Resistive touchscreen, alphanumeric plus function keys on 15" HMI	Alphanumeric with tactile response, 4 application keys, and 15 assignable softkeys	Alphanumeric with tactile response and 15 assignable softkeys, navigation keys
Scale Interface	4 x analog, SICSpro digital, or SICS Lab balance and APW interface	Up to 4 x analog scale, POWERCELL®, SICS lab balance, or SICSpro digital scales	1 x analog scale, 1x PBK/PFK scale, or 1 x POWERCELL®
Communication Interface	Standard Ethernet TCP/IP, USB host and optional RS232/422/485, USB device, DIO	Standard Ethernet TCP/IP, USB host, 2 x standard RS232/422/485 and 2 x optional RS232/485, DIO, multiple fieldbus options	1 x standard RS232/422/485, USB and 2 x optional RS232/485, Ethernet TCP/IP, DIO, multiple fieldbus options
Housing	Stainless steel, wall/desk or panel	Stainless steel, wall/desk or panel	Stainless steel, wall/desk or panel
IP Protection	IP69k or IP40 (ELO 2)	IP69k, IP65 (panel version)	IP69k, IP65 Type4x/12 (panel version)
Power	100–240 VAC	85–264 VAC	85–264 VAC, 24 VDC available in panel-mount models
Programming Environment and OS	MS Visual Studio or embedded Compact 7	METTLER TOLEDO TaskExpert or MS Visual Studio, Windows CE	METTLER TOLEDO TaskExpert
More Information	**www.mt.com/IND890**	**www.mt.com/IND780**	**www.mt.com/IND570**

Requirement fulfillment scoring: ★★★★ very good   ★★★☆ good   ★★☆☆ fair   ★☆☆☆ limited   ☆☆☆☆ none

Terminals for Hazardous Areas
Compliance and Safety

Protection and safety without compromise are requirements for working in hazardous areas. These terminals have been certified to the latest global standards, helping to ensure that your weighing system is suitable for such production environments. Additionally, they provide enhanced capabilities for the safe communication of weighing data to the hazardous area via a variety of interfaces.

▶ **www.mt.com/ind-hazardous**

METTLER TOLEDO offers hazardous area approvals in most major markets. Obtaining required approvals, such as ATEX, IECEx, NEPSI, US/Canada NEC/CEC and other local standards, helps to ensure that equipment meets local regulatory requirements.

Easy Integration
Support for multiple fieldbus protocols, sample PLC interface code and extensive product documentation increases processing speed and simplifies integration.

Filling, Dosing and Blending
Powerful application software and I/O suitable for use in hazardous areas automates the materialtransfer process.

AC or Battery Powered
Terminals can be powered either via a fixed AC power supply or a compact rechargeable battery to enable mobile-weighing applications.

Safety and Connectivity in Explosive Environments

To increase safety while improving production efficiency, intrinsically safe equipment is the protection method of choice. Intrinsically safe weighing systems for hazardous areas consist of several components, such as weighing platforms, terminals, power supplies, communication modules and safety barriers. Typically, they can also incorporate a wide range of peripherals, such as PCs, printers or data communication systems. METTLER TOLEDO 's intrinsically safe weighing terminals provide the benefits of modularity and flexibility to allow a variety of communication interfaces, such as serial interfaces, Ethernet TCP/IP and a wide range of automation fieldbus types.

Terminals for Hazardous Areas
Deliver Safety and Connectivity

Intrinsically safe technology provides protection without difficult-to-maintain and bulky cast flame-proof enclosures. Our range of intrinsically safe terminals for use in hazardous areas provides safe basic weighing or, for more advanced applications, connectivity to peripheral devices in safe or hazardous areas.

Intrinsically Safe Solutions

Intrinsic safety makes weighing in classified areas safe. Download our white paper on intrinsic safety:

▶ **www.mt.com/ind-intrinsic_safety**

▶ **www.mt.com/ind-hazardous**

	IND560x	ICS466x	IND226x	IND570xx
	Flexible and powerful weighing terminal that provides connectivity to a broad variety of automation equipment.	Fits perfectly with compact bench scales, for simple filling or advanced checkweighing.	Easy-to-operate for connection to analog bench and floor scales.	Flexible terminal with many advanced weighing features.
Applications	• Custom filling, dosing or blending • Custom counting • Custom workflow	• Custom filling, dosing or blending • Custom vehicle weighing • Custom workflow	• Custom filling, dosing or blending • Custom vehicle weighing • Custom workflow	• Custom filling, dosing or blending • Custom workflow
Versatility	★★★☆ Battery or AC power versions, wall/desk or panel mounting, remote display mode	★★☆☆ Connection to both an analog and a digital scale with one terminal	★☆☆☆ Use as weighing terminal or remote display, battery or AC power versions	★★★☆ Multiple fonts, and program objects to choose from via the programming tool
Process Integration	★★★☆ Serial, Ethernet TCP/IP, USB, DIO, PLC	★☆☆☆ Serial data interface to the safe area	★☆☆☆ Serial data interface to the safe area	★★★☆ Serial, Ethernet TCP/IP, USB, DIO
Data Management	★★★☆ Stored targets, multiple tables and reports	★★★☆ Store up to 100 targets with the internal database	★☆☆☆ Stored target for over/under checkweighing or manual filling	★★★☆ Ethernet, FTP and email functions File replication PC app call-backs, table management
Compliance Support	★★★☆ ATEX Cat. 2GD; cFMus Div 1, IECEx Zone 1/21	★★★☆ ATEX Cat. 2GD; cFMus Div 1, IECEx Zone 1/21	★★★☆ ATEX Cat. 2GD; cFMus Div 1, IECEx Zone 1/21	★★★☆ ATEX Cat. 3GD; cFMus Div 2, IECEx Zone 2/22
Performance Optimization	★★★☆ Ability to automate filling and dosing processes with Fill-570 software	★★★☆ colorWeight® indication of weight status	★★☆☆ Easy-to-read 30mm character height for weight display	★★★☆ Customization of HMI, control DIO, create custom workflow with prompting
Display	128 x 64 dot matrix LCD graphical display with backlight	240 x 96 graphic display with colored backlight	6 characters, 30 mm 7-segment LED	256 x 128 dot OLED monochrome graphic LCD
Keypad	Tactile with 5 x assignable softkeys, scale function keys and alphanumeric keys	Tactile with 5 x assignable softkeys, scale function keys and alphanumeric keys	Hard-coated polyester overlay with 6 scale function keys	Alphanumeric with tactile response and 15 assignable softkeys, navigation keys
Scale Interface	1 x analog scale up to 4 x 350 ohm load cells or 1 x IDNet Kx base	Up to 1 x analog and x IDNet, or 2 x IDNet Kx base	1 x analog scale up to 4 x 350 ohm load cells	1 x analog scale up to 8 x 350 ohm load cells or 1 x IDNet High-Precision K-Line, +12V version only
Communication Interface	1 x standard RS232 and optional 1x RS232, RS422/485, Ethernet TCP/IP, USB, or PLC via current loop or fiber option connection to ACM500 communication module in the safe area	1 x standard RS232 and optional 1 x RS232, RS422/485, CL20ma via current loop connection to ACM200 communication module in the safe area	1 x optional RS232, RS422/485, CL20ma via current loop connection to ACM200 communication module in the safe area	1 x standard RS232/422/485, 2 x optional RS232/422/485, Ethernet TCP/IP, DIO, multiple fieldbus options
Housing	Stainless steel, wall/desk or panel	Stainless steel, wall/desk	Stainless steel, wall/desk	Stainless steel, wall/desk or panel
IP Protection	IP69k, IP65 (panel version)	IP65	IP66	IP65
Power	Connection to METTLER TOLEDO AC power supply or external battery installed in the hazardous area	Connection to METTLER TOLEDO AC power installed in the hazardous area	Connection to METTLER TOLEDO AC power supply or external battery installed in the hazardous area	85-264 VAC, 20-29 VDC (panel-mounted enclosure only)
More Information	www.mt.com/IND560x	www.mt.com/ICS466x	www.mt.com/IND226x	www.mt.com/IND570xx

Requirement fulfillment scoring: ★★★★ very good   ★★★☆ good   ★★☆☆ fair   ★☆☆☆ limited   ☆☆☆☆ none

Hazardous-Area Terminal Accessories
Modern Communication and Energy Supply

Power supplies and communication modules are a critical part of a hazardous-area terminal system. These accessories are designed and approved for seamless use with METTLER TOLEDO hazardous-area weighing terminals.

▶ **www.mt.com/ind-hazardous**

Hazardous-Area Scales and Solutions

The right power supplies and communications accessories ensure the safe performance of terminals located in hazardous areas. Learn more at:

▶ **www.mt.com/ind-hazardous**

	APS768x	APS500/501	64060627/64060625	ACM200	ACM500
	120V or 230VAC external power supply for use in the Zone 1/21 and Division 1 areas.	120V or 240VAC external power supply for use in the Zone 1/21 and Division 1 areas.	8AH NiMH external battery for use in the Zone 1/21 and Division 1 areas.	Safe-area communication module.	Safe-area communication module.
	• **Robust Design** Suitable for washdown and corrosive environments. • **Versatile Connectivity** Provides connection of digital bases to the safe area with ACM200 communication module.	• **Compact Design** Suitable for mounting via screws to a flat surface.	• **Robust Design** Suitable for washdown and corrosive environments. • **Easy Mounting** Can mount to any flat surface via fastening screws. • Must be charged in the safe area via 64060217 or 64060490 battery charger.	• **Safe-Area Communication** Sends serial data via a CL interface from weighing terminal to a PC, printer or other device. • **Scale Commands** Can be used to send scale commands, such as zero, tare, or print, from the safe area; supports SICS commands for scale status and weighing commands.	• **Safe-Area Communication** Communicate via serial and Ethernet TCP to the safe area. • **Flexible Interface** Support current loop or fiber-optic connection to the safe area. • **Expanded Functionality** Provides PLC fieldbus and remote I/O connectivity.
Interface to Terminal Models	IND226x, IND560x, ICS466x	IND226x	IND226x, IND560x	IND226x, ICS466x, IND560x	IND560x
Input Voltage	120VAC and 230VAC versions	120VAC and 240VAC versions		100–240 V AC, 50/60 Hz or 24VDC	100–240 V AC, 50/60 Hz
Dimensions	320 x 172 x 80 mm	170 x 153 x 108 mm	133 x 236 x 76 mm	69.5 x 175 x 160 mm	208 x 263 x 116 mm
Housing Material	Stainless steel	Cast aluminum	Stainless steel	Stainless steel	Stainless steel
Protection Rating	IP66	IP66	IP67	IP66	IP66
Cable Length	5 m cable to terminal	3 m cable to terminal	3 m cable to terminal	Up to 300 m CL (ordered separately)	Up to 300 m CL or fiber optic
Approvals	ATEX, IECEx, cFMus II 2G Ex e mb [ib] IIC T4 Gb II 2D Ex t IIIC [ib] IP66 T70°C Db Class I, II, III; Division 1; Group A, B, C, D, E, F, G / T4 Ta = 40 °C	ATEX, IECEx, cFMus II 2 G Ex emb [ib] IIC T5 Gb II 2 D Ex tb IIIC T64°C Db IP66 Class I; Div 1 Groups B, C, D T6 Ta = 40 °C Class I, IIII; Div 1 Groups E, F, G / T6 Ta = 40 °C	ATEX, IECEx, cFMus II 2 D Ex ibD 21 T93°C IP66 Db Class I, II, III; Division 1; Group A, B, C, D, E, F, G / T5 Ta = 40 °C	ATEX, IECEx, cFMus II (2) G [Ex ib Gb] IIC II (2) D [Ex ib Db] IIIC Class I, II, III; Division 1; Group A, B, C, D, E, F, G	ATEX, IECEx, cFMus II (2) G [Ex ib Gb] IIC II (2) D [Ex ib Db] IIIC Class I, II, III / 1 / ABCDEFG; Entity; IP66

Terminal IND570 with Fill-570 Software
For Filling, Dosing and Blending

Modular, multi-functional and easy-to-program, IND570Fill supports quick adaptation of material-delivery processes to changing business needs. Whether integrated into an existing control system or functioning as a stand-alone process controller, IND570Fill provides flexibility to deploy workforce and manufacturing resources for maximum productivity.

▶ **www.mt.com/IND570**

Fill-570 offers easy-to-program filling, blending and dosing sequences, together with fast-updating discrete I/O. These capabilities combine to create a reliable and accurate stand-alone process controller offering real potential for savings.

Performance Monitoring
The Pac Statistics function calculates performance statistics. It provides data to help identify system adjustments that can shorten cycle times, reduce waste and improve margins.

Integrated Data Storage
Fill-570 includes libraries for materials, formulas and containers. Recall stored data for use in production with an easy barcode scan to improve process efficiency and avoid errors.

Expandable Solution
The IND570 terminal offers multiple PLC interfaces and a broad command set that eases integration into existing control structures so you can capitalize on existing investments.

Supported Material Transfer Cycles
Enhanced Material Handling Capability for IND570

The following pre-programmed material transfer cycles and features are included:

- Fill
- Blend (up to 6 materials)
- Dump
- Cycle Combinations
- Learn Mode
- Auto Tolerance Check

Batch-780 Application Software
For Formulation or Batching

Engineered for the food, specialty chemical, plastics, glass and aggregates batching and formulation markets, IND780batch works as a stand-alone terminal for single or multi-scale applications. It offers high speed cut-off and Ethernet connectivity for PCs, terminals and configurable I/O. Installation and setup are quick and easy, providing a "box-to-batch" solution.

▶ **www.mt.com/IND780batch**

The IND780 batch provides multiple control options. The system is easily adapted to most batching, filling and formulation applications, providing functionality for automatic, semi-automatic and manual modes of operation. It also supports automatic material transfer with input from up to four scales.

IND780batch PC Configuration Tool
Configures equipment, creates and manages recipes and orders, generates track-and-trace data and reports; provides connectivity to customers databases

Recipes / Orders
Configuration tool downloads recipes and orders to one or more IND780batch PC terminals

Batching System
IND780batch terminal controls automatic and manual batching processes
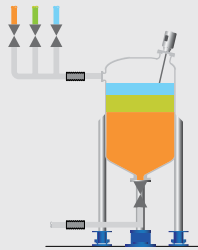
Barcode Scanner
Input devices simplify material lot and batch tracking

Printer
IND780batch terminal prints batch data automatically and on demand

Integrated Batching Solution

Features and Benefits

Controller	Self-contained, stand-alone controller
Simultaneous Operation	Supports up to 4 scales
Inputs & Outputs	Supports up to 40 inputs and 56 outputs
Formulation Mode	Manual formulation only or fully-automatic
PC Configuration Tool	Allows recipe and order creation, track and trace logging, security setup, and usage report
Storage	Storage for up to 1,000 recipes that can each contain up to 99 steps
Batch Adjustments	Ability to adjust batch order size by percent, target value, or ingredient amount with recipe looping capability

Stand-alone Operation
Operating without the need for a PLC or DCS system, the IND780batch is equipped with a large, easy-to-read color graphics HMI display.

Easy Configuration
IND780batch includes libraries for materials, formulas and containers. Recall stored data for use in production with a barcode scan to improve process efficiency and avoid errors.

Increased Manufacturing Efficiency
Enhance your automatic material transfer batch process by adding the Q.iMPACT® material transfer control feature.

Q.iMPACT
## Software for Optimized Feed Control

In many applications, the characteristics of a raw material or the delivery system itself can impact feed-rate accuracy. Patented algorithms embedded in Q.iMPACT™ material feed controllers from METTLER TOLEDO dynamically adjust target parameters in real time to ensure ongoing accuracy.

▶ **www.mt.com/IND780**

Q.i-780 combines second generation Q.i advanced material transfer control technology with the features and benefits of the IND780 terminal. Q.i-780 is engineered to work with your control platform to master feed measurement, management and cutoff control for all your batching, blending, filling, dosing and formulation processes.

Without Q.i

Accuracy Throughput   Accuracy Throughput

With Q.i

Accuracy **+** Throughput
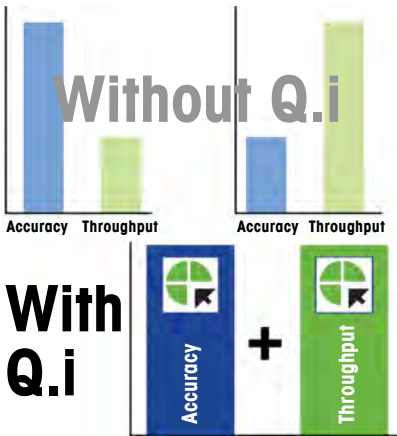
Minimize Production Cost
Reduce costly overfills, underfills, rework and scrap while decreasing the number of required operator touches for better productivity.
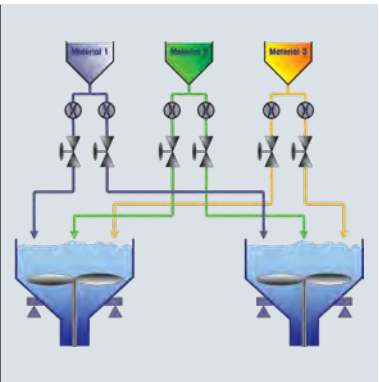
Increase Manufacturing Capacity
Fast Q.i control algorithms reduce feed time while maintaining or improving feed accuracy.

Improve Material Feed Accuracy
Continuously model and compensate for normal process variability during each feed while maintaining or improving throughput.

Remote   Remote   Master

Ethernet switch

EtherNet/IP
ControlNet
PROFIBUS

PLC od DCS

Q.i Configuration Tool   Q.i Web-Server

Material Transfer Control
for Batching, Blending and Filling Applications
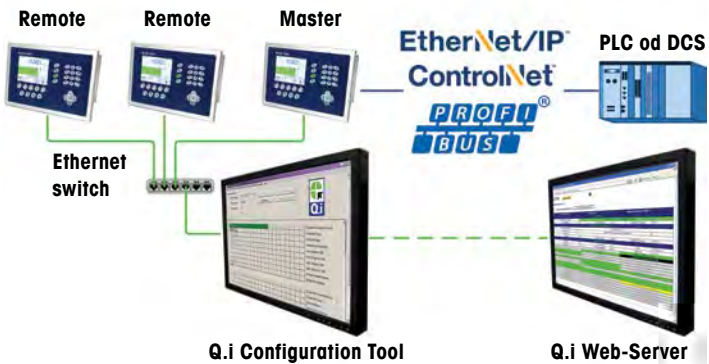
Features and Benefits

|	
Flexible	Concurrent monitoring and control of scales, load-cell systems and flow meters; gain-in-weight, loss-in-weight and flow-meter feeds cover all types of material transfer
Innovative	Patented Predictive Adaptive Control (PAC) algorithms consistently minimize material feed variability and maximize production throughput
Powerful	Q.i terminal clustering allows for large systems comprising up to 198 scale/flow meter combinations
Integrated	Multiple fieldbus options allow freedom to choose PLC or DCS platforms and maintain existing control platform architecture
Efficient	Q.i single-speed feed control provides fast and accurate control without extensive control hardware while built-in auto-jog automatically corrects out-of-tolerance feeds
Safe	Pre-feed condition ensures stable scale and prevent possible vessel overflow
Smart	Post-feed check verifies feed performance
Proven	Documented cost savings and attractive ROI in a broad variety of industries and applications

InSite® SL
Terminal Backup Software

The InSite® SL is a PC application that can be used to save the values of various terminal setup parameters and restore them at a later date or copy them to other terminals.
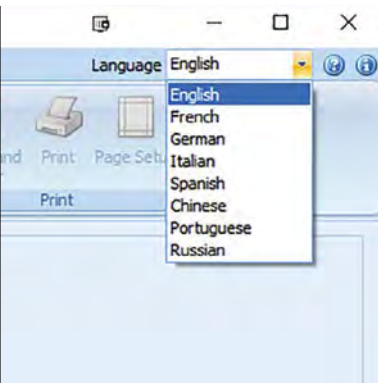
▶ **www.mt.com/Insight-SL**

InSite® SL is compatible with most METTLER TOLEDO IND and ICS weighing terminals. Drop-down selection tools allow easy weighing terminal connection.
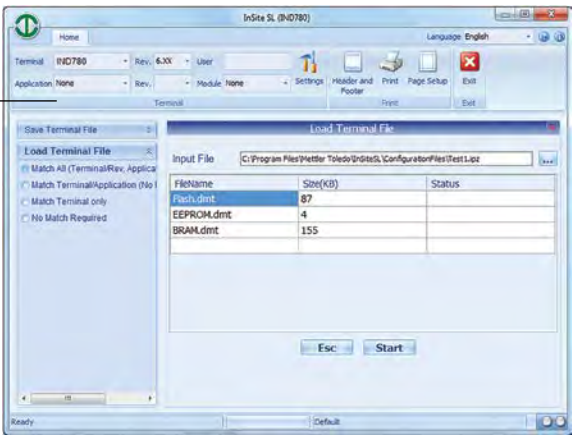
Secure
Password protection on the terminal prevents inadvertent or unauthorized changes to the terminal configuration, both via InSite and via the weighing terminal HMI.

Multi-Language Enabled
InSite offers multiple user languages that match those available in the weighing terminal. It is compatible with Windows 7, 8, and 10 operating systems.

Easy to Use
InSite provides easy back-up and restoration of METTLER TOLEDO weighing terminal configuration files via either a serial or Ethernet connection.

Full Data Backup to a PC or Network
of Important Terminal Files
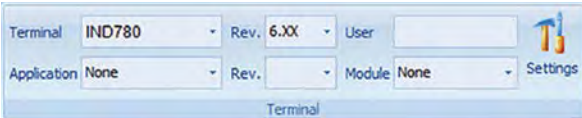
Features and Benefits

Application Back-Up	Save terminal-specific application files for back-up or restore.
Data Safety	Table information, such as stored tares values, can be saved and restored.
Configuration History	Configuration files can be saved for archiving purposes.
Secure Access	Manages security settings to avoid unauthorized file retrieval.

Automation Transmitters
Connectivity Made Easy

Due to high speed update rates up to 600Hz, a PLC can control the weighing process without any supporting transmitter function. Maximum flexibility is guaranteed with state-of-the-art PLC communication.

▶ **www.mt.com/terminals**

State-of-the-art PLC communication with floating-point weight values and status bits mean no further PLC software conversion is required.

High Speed
600Hz PLC update rate and 1,200Hz I/O update rate allow for wide application in packaging, sorting and checkweighing.

Digital I/O
Achieve maximum process control via ultra-fast digital inputs and outputs.

Run Flat
Monitors PowerCell® load cells online, alarms in case of failure and provides RunFlat function; ensuring that manufacturing can continue.

Filtering for Stable Results

The ACT350 family provides sophisticated TraxDSP filtering, which can be set up to match the application. Filtering cut-off frequency, stability filter and environmental adaptions allows you to find the best compromise between response time and stability.

OIML | NTEP | PROFIBUS® | PROFINET® | EtherNet/IP™
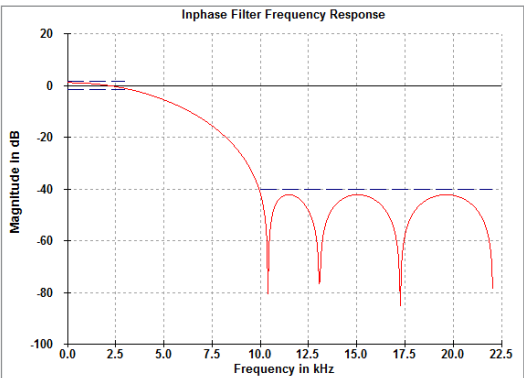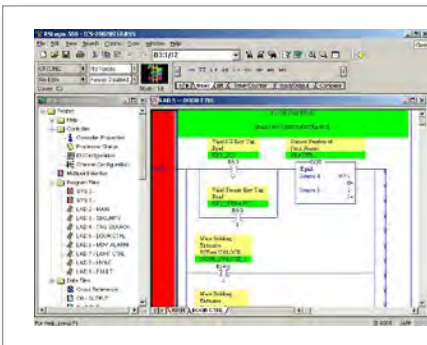
Automation Transmitters
Process More, Faster

Automation transmitters convert the load-cell signal into a scale signal that is PLC-compliant and digital or analog-output ready for post-processing. They are typically installed in control cabinets.

▸ **www.mt.com/terminals**

ACT350 PLC Sample Code

Download the sample code for easy PLC integration:

▸ **www.mt.com/ind-act350-downloads**

	ACT350	IND110
	• **Fieldbus Connectivity** Direct fieldbus output compatible with PLC standards	• **Easy Setup** Digital setup allows for precise calibration by buttons
	• **Fast and Accurate** High-speed PLC communication for full system control via PLC software	• **Options** IP65 housing and flame-proof enclosure available
Applications	Filling, batching, general weighing	Control by weight
Interface	PROFIBUS DP, PROFINET IO, EtherNet/IP	4–20mA
Update Rate	600Hz	20Hz
Digital I/O	no	2 x Out
Power	12–30VDC	24VDC
Load Cell	8 x 350 Ohm analog	4 x 350 Ohm analog
Accuracy	OIML C6, NTEP 10,000	0.012%
Hazardous	n/a	n/a
Housing, Protection	DIN Rail, plastic, IP20	DIN Rail, plastic IP20, IP65 option
More Information	**www.mt.com/ind-ACT350**	**www.mt.com/terminals**

EtherNet/IP

PROFI NET®

PLC

HMI

ACT350

Switch

Load Cell
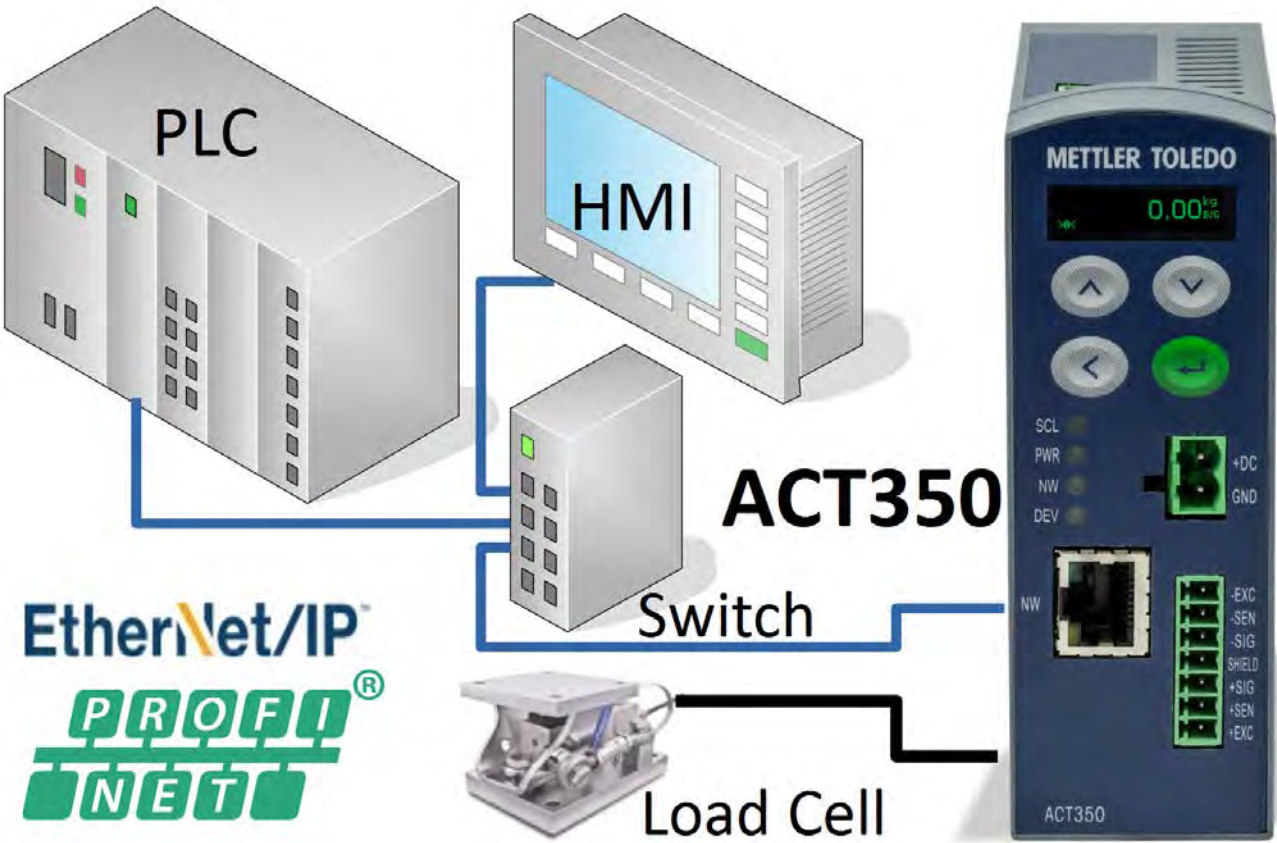
Barrier and Converter Connections
Completing Your Solution

Expanding weighing system connectivity may require a METTLER TOLEDO accessory designed for the purpose. These easy-to-integrate add-ons enable creation of a custom solution that fits your process needs.

	A100	**ARM100**	**ISB05/ISB05x**	**ISB15/ISB15x**
	Provides 4–20 ma signal based on continuous weight output from a weighing terminal.	Remote I/O module for use with compatible METTLER TOLEDO weighing terminals.	Hazardous-area barrier for use with terminals having 5V load cell excitation.	Hazardous area barrier for use with terminals having up to 15V load cell excitation.
			DIN Rail version / Ex flameproof housing	DIN Rail version / Ex flameproof housing
	• **Flexible usage** 4–20 ma output plus setpoint outputs with HI and LO LEDs • **Suitable for installation to Din rail or on wall/column** Optional IP65 stainless-steel enclosure, material #64053670	• **4 inputs / 6 outputs** Optically isolated inputs, 5–24 VDC Dry contact relay outputs, 250 VAC 1A • **Suitable for installation to Din rail or on wall/column** Optional IP65 stainless-steel enclosure, material #64053670	• **Global regulatory approvals** Enables terminals to provide a safe power level to scales in a hazardous area • **Models for installation in safe or Ex area** Cast aluminum Ex flameproof enclosure for use in Zone 1/21 or Div 1 area	• **Global regulatory approvals** Enables terminals to provide a safe power level to scales in a hazardous area • **Models for installation in safe or Ex area** Cast aluminum Ex flameproof enclosure for use in Zone 1/21 or Div 1 area
Compatible With	METTLER TOLEDO weighing terminals with continuous weight output or SICS level 0 communication	IND560, IND570, IND780, IND890	+1 to +5 VDC analog load cell excitation circuit	+5 to +15 VDC analog load cell excitation circuit
Operating Voltage	24VDC	24VDC	Powered from weighing terminal	Powered from weighing terminal
Data Communication	RS-232, RS-485, or 20 mA current loop or fiber optic	RS485		
Dimensions	74 x 100 x 57 mm (W x H x D)	74 x 100 x 57 mm (W x H x D)	110 x 115 x 35 mm / 150 x 195 x 140 mm	110 x 115 x 35 mm / 150 x 195 x 140 mm
IP Rating	IP20 (IP65 / Type 4 with optional 64053670 stainless-steel enclosure)	IP20 (IP65 / Type 4 with optional 64053670 stainless-steel enclosure)	IP20 / IP66	IP20 / IP66

Software

Our Solution
To Manage Your Production

Software Solutions for Data Management
Operational Excellence through Analysis

When operational excellence is your goal, data is everything. Our software solutions automatically and securely collect production data from the shop floor through to your entire value chain. Analyzing that data allows you to make informed decisions that can ultimately impact business results.

▶ **www.mt.com/ind-software**

Data Storage and Representation
Collected data must be archived in a central location. Our software allows you to retrieve the data for analysis in Excel. Use dashboards and standard software reporting tools to get insight into your production process. Drill-down functionalities are available to provide you with detailed information.
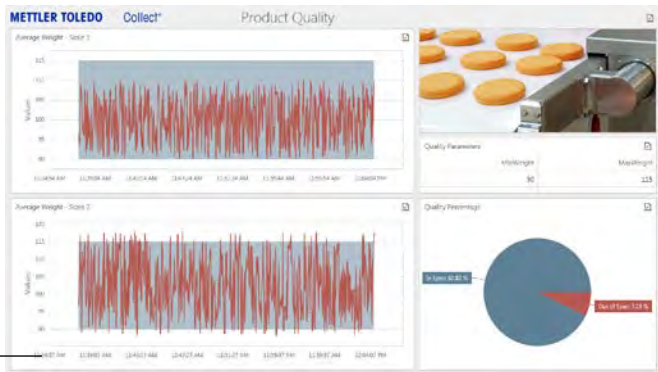
Formulation Recipe Management
Eliminate operator error and material waste for greater predictability and profitability. Ensure high-quality process results with proper data handling.

Statistical Quality Control
Comply with legal requirements by archiving sample-based production parameters in a centralized database. Create and analyze statistics for productivity improvements.

A New Perspective
Create a graphical perspective of your process data. View data in multiple ways to see your results in an easy to understand way.

The Power of Integrated Software Solutions
Achieve High-Quality Results and Productivity Improvements!

Make use of various production data sources while complying with legal demands and international standards.

Data Management	Collect, archive, maintain and manage data in a central location.
Data Integration	Use process-data information in multiple departments and for different roles to better understand and improve your value chain.
Production Process Analysis	Understand production process deviations and make relevant changes by analyzing data to build key performance indicators.
Plant-wide Optimization	Compare results with other divisions and sites to improve the entire business.
Documentation	Automatically collect data and avoid costly manual collection. Store data electronically to ensure consistent documentation of all production process data.
Audit	Use current and historical data to deliver evidence of proper production according to international standards and legislations.
21 CFR Part 11	Software solutions also can be introduced into validated environments that comply with international standards.
More Information	**www.mt.com/ind-software**

ℯ ISO 9001 registered   ISO 14001 registered

Dispensing and Formulation System
Process Guidance for Consistent Quality

FormWeigh.Net® software for recipe management and material dispensing provides intuitive guidance for your production process. It allows you to optimize your manufacturing process by eliminating operator error and material waste for greater predictability and profitability.

▸ **www.mt.com/FormWeighNet**

Take Control of Your Processes
Each process step is displayed for the operator in easy-to-understand screens. Quality checks are enforced at weighing stations. Automatic scale selection provides assurance that the operator cannot make a mistake.

Reliable, Traceable Results
Electronically document your processes and results on a centralized database without compromising your flexibility. Take control of your workflows to see which orders are completed, in progress or awaiting processing.

Increase Production Yield
Powerful functions, such as FEFO (First Expire – First Out), allow you to fully utilize your materials and reduce waste. This helps make your production more cost-effective and environmentally friendly.
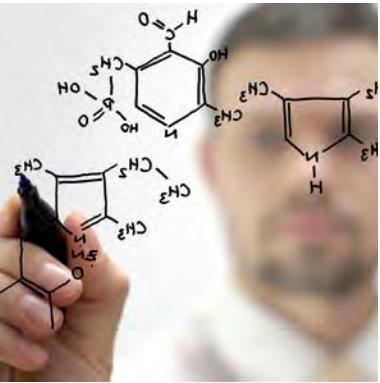
Simplify Your Tasks
FormWeigh.Net for dispensing and formulation is designed to simplify your complex and demanding formulation needs. An intuitive formulation process ensures stable product quality from batch to batch.

Ensure Consistency
Automated Batch Evidence Reporting

Master Data Management	Monitoring and reporting keep materials and processes under control. Allows fast access to crucial control functions so you can easily manage materials, instructions, recipes, orders, history, label reprints, reports and users.
Advanced Stock Management	Optimized material picking – according to FEFO principle (First Expire – First Out).
Textual Instructions	Increased operator efficiency by guidance through reliable and documented process steps. Release personnel from countercheck principles and assign parallel tasks.
Reporting	Use a set of standard reports including weighing, manufacturing, exception, order, consumption or materials list. Tailor your custom reports to your corporate design guidelines.
21 CFR Part 11 Ready	Ensure FDA compliance and electronic documentation.
ERP Data Integration	Seamless online data management. Exchange production data with ERP systems to prevent errors and data redundancy.
System Setup	Network solution with MS Windows operating system and MSSQL Database.
More Information	**www.mt.com/FormWeighNet**

ISO 9001 registered   ISO 14001 registered

Data Collection and Monitoring
Solid Support for Business Decisions

Collect+™ data collection and visualization software brings a new perspective to your processes. It graphically represents trends, offering the transparent operational views necessary to maintain high-quality, profitable manufacturing.

▸ **www.mt.com/collectplus**

Intelligent Data Capture
Efficiently store all measurement values centrally. Easily export raw data to other systems in your plant, including Microsoft® Excel®, via the web-based interface.

Remote Monitoring Display
View material levels in remote silo farms or track environmental factors, such as temperature and pressure. Specify how often the measurement should be checked and see the dashboard update automatically.

Monitor Product Quality
Display your key performance indicators in helpful dashboards to observe trends and highlight deviations. Ensure the quality of your product by taking corrective action before failures occur.

Track Production Efficiency
Estimate process performance by work station on a timely basis or analyze total throughput. Predict how many parts will be completed within a specific timeframe to better allocate resources.
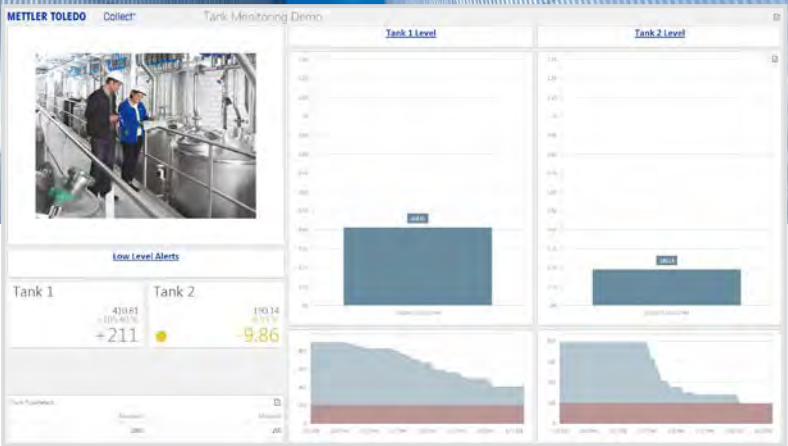
Collect+™ Data Collection
Link Your Scales to Your Business

Represent process trends and key performance indicators graphically to support sound decision-making and maintain quality and profitability.

Data Collection	Collect process data from many types of devices, including scale terminals and other sensors. Retrieve data via RS232 or Ethernet TCP/IP connections.
Graphical Visualization	Easily analyze current production status using dynamic and engaging dashboards. View dashboards from anywhere in your plant, even on tablets.
Knowledge Sharing	Share web-based dashboard links with others so they can view on their PCs. Save data as CSV files and dashboards as PDF files for archiving. Export data to Microsoft Excel for advanced analysis or transfer to other systems.
System Requirements	MS Windows 7 SP1 or higher, 2.0GHz dual-core processor, 4 GB RAM, 200 GB free HDD
Web Browser Support	MS Internet Explorer 11, MS Edge, Google Chrome 35 and higher, Mozilla Firefox 30 and higher, Apple Safari for iOS 7 and higher
Database Support	Microsoft® SQL Server® 2008 SP3 / 2008 R2 SP2 / 2012 SP2 / 2014
Device Compatibility	Compatible with METTLER TOLEDO scale terminals, and many other devices with data output
System Setup	Stand-alone or network
More Information	**www.mt.com/collectplus**

ISO 9001 registered ISO 14001 registered

Statistical Quality & Process Control
Legal Compliance and Productivity

FreeWeigh.Net™ for process control helps you comply with legal requirements by documenting and archiving sample-based production parameters in a centralized database. Furthermore, it helps you optimize filling processes and reduce overfills to enhance productivity and maximize revenue.

▶ **www.mt.com/FreeWeigh**

Provide Documented Evidence
Meaningful diagrams help users to identify quality issues in the production process. Sample mean values as well as standard deviations are presented. A quality statistic provides information about total production to help increase productivity.

Connectivity to MES/ERP
Connectivity is key to thorough and complete process control. Connect FreeWeigh to any third-party device, PLC or software solution.

Control Beyond Weight
Check attributes of any visual control or automated non-weight data, such as torque, density and much more, to complete your statistic.

21 CFR Part 11 Compliance
The system helps to ensure compliance for FDA-regulated industries. Perform system validation and make use of audit trail and electronic signature documentation.

Quality and Filling-Cost Control
Control Your Process, Enhance Productivity

Use weight statistics to control your filling process and comply with legal requirements.

Batch Management	Manage batch data. Create batch reports and release batches.
Multi-component Weighing	Weigh and control multiple components constituting one product.
Multi-head Statistic Control	Ensure quality per filling head or see the mean value of a set of multiple filling heads.
Attribute Control and Test Plan	Simultaneously check non-weighing data, such as visual control, to achieve a comprehensive test plan for consistent documentation. This includes connectivity to third-party devices.
Statistical Process Control (SPC)	Recognize process deviations immediately through underlying defined rules.
Formula Editor for Customized KPI	Define and create your own key performance indicators to optimize reporting and decision-making.
21 CFR Part 11 Ready	Ensure validation in a regulated environment.
System Setup	Operate this solution as stand-alone system or as part of a network application.
More Information	www.mt.com/FreeWeigh

Statistical Quality Control
Ensure High-Quality Production

Statistical quality control (SQC) is an important production aid to ensure consistent quality throughout your process by controlling variables, such as weight. With the IND890SQC terminal, all basic control-system requirements are met with a fast, easy-to-operate and reliable standalone solution. You gain an intuitive interface to fine-tune production in the easiest way possible.

▶ **www.mt.com/IND890sqc**

Constant Control

A big touchscreen with an intuitive menu guides the operator through the predefined product sample test sequence. Integrated tolerance systems support you in your efforts to comply with national and international net-content legislation and global standards.

Ready for Harsh Environments
The terminal is designed for hygienically sensitive environments. It comes marked IP69K, making it suitable for high-pressure, high-temperature wash-down applications.

Ease of Use
The system provides pre-configured information so operators can configure it in just a few steps. It is user-friendly and easy to set up and operate.
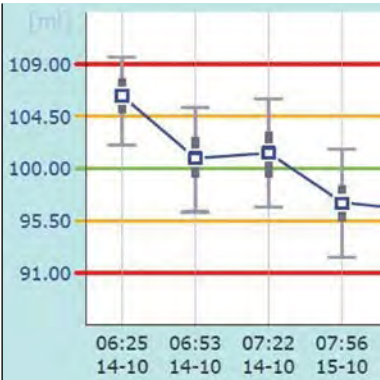
All-in-one Quality Assurance
IND890SQC is a powerful and efficient SQC tool. Receive meaningful results of random sampling from useful, easy-to-understand reports.

Stand-Alone Statistical Quality Control
Reliable Information for Quality Assurance

Collect, calculate and report information allows operators to react immediately if a violation occurs.

Touchscreen Interface	Standard on all models at 10" size, measured diagonally.
Environmental Protection	IP69K compliant, suitable for harsh industrial environments. Stainless housing with Ra<0.8μm surface finish.
Data Storage	Internal compact flash storage memory standard in all models.
Connectivity	Ethernet connectivity standard for integration into industrial networks. Select and install up to six interfaces including scales, USB and serial (RS-232) for connection to PCs, printers and bar-code readers.
Regulatory Compliance	Choose from several different tolerance systems for effortless regulatory compliance.
Flexible Reporting	Export reports to a memory stick or a network-accessible server folder.
Operation	Enter product information quickly and accurately using the touchscreen HMI. An information line messages the operator if a sample series or statistic has passed or failed.
More Information	**www.mt.com/IND890sqc**

Weighing Data Transfer Solution
Software for PC-Based Scale Integration

WeighSync DC software allows data from individual weighing transactions or stored tables to be transferred automatically from a terminal to a central database using an Ethernet or serial connection. Weighing data transfer can be automated in real time or initiated manually, or can occur on a set schedule.

▶ **www.mt.com/ind-WeighSync**

Pre-defined templates enable quick connection to a broad variety of METTLER TOLEDO industrial weighing terminals. From within WeighSync DC software, simply select the terminal's template from a drop-down menu.

Flexible Configuration
Custom configuration parameters provide the flexibility to define data structures that can be mapped a Microsoft® SQL Server Express database.

Scalable for Future Growth
The WeighSync network supports serial connection to communicate with older terminals, but it is also ready to take advantage of newer, Ethernet-enabled products.
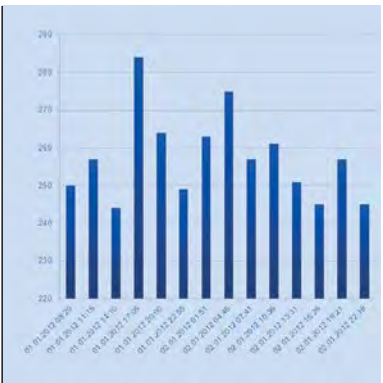
Data Reporting
Use collected data to create tables and graphs for reporting in Microsoft® Excel® and other programs for efficient tracking and tracing.

Flexible Data Integration Application
for Weighing Terminals

Features and Benefits

Supported Devices	Connects to METTLER TOLEDO industrial weighing terminals, laboratory scales and non-METTLER TOLEDO products via the custom-configuration interface.
Data Input Types	Demand Print data from weighing terminal print templates and data from standard tables found in METTLER TOLEDO industrial weighing terminals.
Data Viewing	Live data transfer monitoring with an ability to view detailed data from multiple devices.
Data Mapping	Ability to specify the number of data fields, length of each field, data type and characters to remove from the incoming data string and match desired database formats.
Search Functionality	Supports transaction data searches by device name and serial number, data range and data type.
Data Reporting	Complete or filtered table reports are available to view, print or export in .csv format.
System Requirements	Microsoft® Windows 7® or Windows 8® Operating System.
More Information	**www.mt.com/ind-WeighSync**

Bench Scales and Platforms

Our Solution
For Your Production

Material Receiving   Quality Control Lab   Automated Production   Engineering & Inventory Control   Manual Production   Packaging & Filling   Logistics
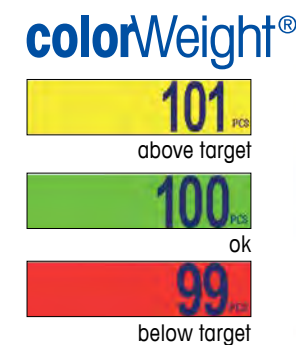
Scales and Platforms
For Wet and Harsh Environments

Stainless-steel scales and platforms are designed for easy and fast cleaning with IP protections up to IP69k. They are fit for heavy wash-down applications and hygienically sensitive processesand can be used in a broad range of applications from checkweighing and portioning to counting. Choose the one that meets your process needs, whether you work with food, pharmaceuticals, or chemicals.

▸ **www.mt.com/bench-scales**

Wherever product integrity matters, color-Weight® checkweighing can be used as a fast and cost-effective quality assurance method. Our scales provide clear information as to whether quality specifications are met and a product is safe for further processing.

colorWeight®

101 PCs	above target
100 PCs	ok
99 PCs	below target

Built for Efficient Cleaning

IP69K-protected terminals and hermetically sealed load cells, engineered in conjunction with platform designs conforming to the latest hygienic guidelines, enable easy access to all scale areas for efficient and easy cleaning.

- Stainless-steel construction
- No open threads
- Smooth surface finish
- Minimized horizontal surfaces
- Full-penetration welding

Premium & Advanced
Provide checkweighing and classifying in hygienically sensitive areas. Benefit from full-graphic display technology, an alphanumeric keypad and multiple interfaces.

Industrial Basics
Industrial Basic Scales feature quality scales at attractive prices. They are suitable for basic food, chemical or manufacturing applications in dry and wet environments.

Weighing Platforms
Solutions are available from 0.6 to 600 kg and thanks to innovative measuring technology, accuracies as low as 1 mg can be reached.

IP68 IP69k OIML NTEP CE SA c UL us IECEx Ex FM APPROVED GMP EHEDG NSF

Bench Scales for Wet Environments
Comparison of Standard Configurations

Scales with ingress protection up to IP69k are designed for demanding weighing tasks in harsh and hygienically sensitive environments.

▶ **www.mt.com/wet-bench-scales**

DatabICS Scale Management Software

DatabICS, for use with ICS4 and ICS6 scales, facilitates the management, set-up and retrieval of stored articles on your PC. Furthermore, the software allows for fast and easy label creation.

▶ **www.mt.com/ind-databics**

	ICS689	**ICS4_9** (ISC469 / ICS449 / ICS439 / ICS429)	**BBA236**	**ICS226**
	Premium bench scale for demanding applications	Bench scale for advanced applications	Cost-effective bench scale for basic applications	Mobile compact scale for basic applications
Applications	• Intuitive checkweighing & portioning • Basic filling & formulation • Fast classifying & average weighing	• Advanced checkweighing & portioning • Accurate counting & totalizing • Fast average weighing	• Basic weighing and checkweighing • Counting & totalizing • Average weighing	• Basic weighing • Simple checkweighing
Accuracy	★★★☆ High precision	★★☆☆ Standard precision	★★☆☆ Standard precision	★★☆☆ Standard precision
Versatility	★★★★ 8 capacities, 8 sizes	★★★☆ 6 capacities, 6 sizes	★★☆☆ 6 capacities, 3 sizes	★☆☆☆ 3 capacities, 1 size
Process Integration	★★★★ Up to 4 scales and 4 data interfaces	★★★☆ Up to 2 scales and 2 data interfaces	★★☆☆ 1 standard & 1 optional interface	★☆☆☆ 1 standard interface
Data Management	★★★★ Database stores up to 5,000 articles	★★☆☆ Database stores up to 100 articles	☆☆☆☆ –	☆☆☆☆ –
Compliance Support	★★★★ Alibi memory and hygienic design for easy cleaning	★★★☆ Alibi memory and hygienic design for easy cleaning	★★☆☆ Hygienic platform for easy cleaning	☆☆☆☆ –
Display	Color TFT (320 x 240) with 3 display layouts, colorWeight® functionality	Graphic LCD display with 3 display layouts, colorWeight® functionality	7-segment LCD display with white backlight	7-segment LCD display with white backlight
Interfaces	RS232, RS422/485, USB, Ethernet, WLAN, digital I/O (4 in- & 4 outputs)	RS232, RS422/485, USB, Ethernet, WLAN, digital I/O (4 in- & 4 outputs)	RS232, RS422/485, USB device, digital I/O	RS232
Resolution (depending on platform)	Approvable: 2 x 3,000e OIML Class III Recommended (max.): </=30,000d	Approvable: 3,000e OIML Class III Recommended (max.): </=15,000d	Approvable: 3,000e OIML Class III Recommended (max.): </=15,000d	Approvable: 3,000e OIML Class III Recommended (max.): </=6,000d
Capacity Range	0.6 kg up to 600 kg	0.6 kg up to 600 kg	3 kg up to 150 kg	3 kg up to 15 kg
Platform Sizes (mm)	210 x 250 up to 600 x 800	210 x 250 up to 600 x 800	240 x 300 up to 400 x 500	228 x 228
Ingress Protection	Scale: IP68/IP69k	Scale: IP68/IP69k	Terminal: IP66/IP67 Platform: IP65	Terminal: IP67 Platform: IP65
Approvals & Certificates	OIML, NTEP, CE, CSA C US, GMP, EHEDG, NSF	OIML, NTEP, CE, CSA, GMP	OIML, NTEP, CE, UL	OIML, NTEP, CE, UL
More Information	See page 68 or **www.mt.com/ICS689**	See page 68 or **www.mt.com/ICS469**	See page 70 or **www.mt.com/BBA236-eu**	See page 72 or **www.mt.com/ICS226**

Requirement fulfillment scoring: ★★★★ very good   ★★★☆ good   ★★☆☆ fair   ★☆☆☆ limited   ☆☆☆☆ none

ICS Bench Scale Series
Where Hygiene Counts

The ICS689, ICS469, ICS449, ICS439 and ICS429 bench and compact scales series can be used for a variety of applications, including over/under checkweighing, counting, classifying, filling and many more. The full stainless-steel design makes it best suited for wet, harsh or hygienic environments especially in the food, pharmaceutical or chemical industries.

▸ **www.mt.com/bench-scales**

The ICS product family supports fast and efficient portioning and classifying processes. Whether filling small containers placed on the platform, or using the powerful take-away mode for filling without a keystroke, ICS scales help to speed up productivity by as much as 20%.

Fast and Secure Data Management
An embedded database stores up to 5,000 articles and 300,000 weighing records for secure traceability and compliance.

colorWeight®️ Speeds up Production
Save time and money with the smart colored display that makes weighing applications faster and less error-prone.

Mobile Operation for the Flexibility of Your Processes
An optional WLAN interface and long-lasting Li-Ion battery pack allows flexible operation anywhere in the facility.

Hygienic Design for Sanitary Environments

From occasionally wet to harsh wash-down conditions, these scales can take it. The stainless-steel platforms and terminals of the ICS6 and ICS4 series provide a flexible and rugged solution for a wide range of weighing tasks. All parts have been engineered and manufactured according to the latest hygienic-design guidelines, resulting in a construction without closed cavities or sharp edges and minimized horizontal surfaces. This allows easy, fast and efficient cleaning.

Connect your scale via Ethernet, WLAN or USB for easy data-transfer. Add a barcode reader or other peripheral for secure material identification.

IP68 IP69k OIML NTEP CE CSA cULus GMP EHEDG NSF

ICS Bench Scale Series
Configurations for Wet Environments

ICS689, ICS469, ICS449, ICS439 and ICS429 bench and compact scales are the perfect solution for any application in wet and harsh environments. These terminals and platforms offer rugged stainless-steel design with excellent ingress protection, which helps to guarantee long product life despite frequent intensive cleaning.

▶ **www.mt.com/wet-bench-scales**

1 Choose an application / terminal

Model	ICS429	ICS439	ICS449	ICS469	ICS689
Applications	⤓	⤓	⤓ ⬢ ±	⤓ ⬢ ±	⤓ ⬢ ± ⤓ ≣
Color TFT Display					•
colorWeight®			•	•	•
Configurable Soft Keys			•	•	•
Numeric (n) / Alphanumeric (a) Keypad		n		n	a
Additional Interface Options	1	1	1	1	3
Attachable Platforms	1	1	2*	2*	4**

* Connection of a second scale to ICS449 and ICS469 is limited to SICSpro- or SICS-interface
* Maximum 2 analog, or 2 IDNet platforms respectively 1 analog plus 1 IDNet

⤓ Basic Weighing ⬢ Counting ± Over/Under Checkweighing ⤓ Filling/Dosing ≣ Classifying

General specifications

Resolution for Analog Platforms***	300,000d; 7,500e, OIML / 10,000d, NTEP
Display	**ICS4_9:** LCD liquid crystal graphical display with backlighting **ICS689:** Color TFT display 320 x 240 pixels
Keypad	**ICS4_9:** Tactile-touch membrane keypad (PET), scratch-resistant material **ICS689:** Piezo keypad, scratch-resistant material
Housing	Stainless steel 1.4301, AISI 304
Protection	IP69k
Power	100–240 VAC; optional battery 12 V / 2.5 A
Standard Interfaces	1 RS232

*** for digital platforms, the resolution is defined by the respective platform

2 Select your interface options / accessories

Optional Data Interfaces	RS232, RS422/485, USB device/host, Ethernet, WLAN, Digital I/O (4 Inputs and 4 Outputs)
Optional Scale Interfaces	digital SICSpro, digital IDNet, analog (max. 2 analog, or 2 IDNet resp. 1 analog and 1 IDNet)
Accessories	Choose from various accessories, such as wall bracket, columns/stands, roller tops, printers, battery packs, relays for digital I/O, barcode scanners and more

3 Combine with a fitting platform for wet and harsh environments

PBA430	Maximum Capacity							
Platform Size	**3 kg**	**6 kg**	**15 kg**	**30 kg**	**60 kg**	**150 kg**	**300 kg**	**600 kg**
A 240 x 300 mm	•	•	•					
BB 300 x 400 mm				•	•			
B 400 x 500 mm				•	•	•		
BC 500 x 650 mm					•	•	•	
CC 600 x 800 mm					•	•	•	•
QA 229 x 229 mm		•						
QB 305 x 305 mm			•	•	•			
QC 457 x 457 mm				•	•			
Approvable Readability	1 g	1/2 g	2/5 g	5/10 g	10/20 g	20/50 g	50/100 g	100/200 g
Recommended Readability (min.)	0.1 g	0.2 g	0.5 g	1 g	2 g	5 g	10 g	20 g
Frame Material	Stainless steel AISI304							
Load Plate Material	Stainless steel AISI304/316							
Load Cell	Hermetically sealed stainless steel							
Approvable Resolution	OIML Class III, 2 x 3,000e							
Recommended Resolution (max.)	30,000d							
Ingress Protection	IP67/IP68							
More Information	**www.mt.com/PBA430**							

PBA226, 426, 429	Maximum Capacity					
Platform Size	**3 kg**	**6 kg**	**15 kg**	**30 kg**	**60 kg**	**150 kg**
A 240 x 300 mm	•	•	•			
BB 300 x 400 mm				•	•	
B 400 x 500 mm				•	•	•*
QA 229 x 229 mm	•	•				
QB 305 x 305 mm			•	•	•	
QC 457 x 457 mm					•*	•*
Approvable Readability	1 g	2 g	5 g	10 g	20 g	20 g
Recommended Readability (min.)	0.2 g	0.5 g	1 g	2 g	5 g	5 g
Frame Material	Stainless steel AISI304					
Load Plate Material	Stainless steel AISI304					
Load Cell	Hermetically sealed, stainless steel & aluminum					
Approvable Resolution	OIML Class III, 3,000e					
Recommended Resolution (max.)	15,000d					
Ingress Protection	Up to IP69/IP68					
More Information	**www.mt.com/PBA429**					

PBK9(x)-Series	Maximum Capacity								
Platform / Load Plate Size	**0.6 kg**	**3 kg**	**6 kg**	**15 kg**	**30 kg**	**60 kg**	**120 kg**	**150 kg**	**300 kg**
XS 210 x 250 / 130 x 160 mm	•								
A 275 x 345 / 240 x 300 mm		•	•						
AB 280 x 350 mm				•	•	•			
B 400 x 500 mm						•	•		
CC 600 x 800 mm								•	•
Approvable Readability	0.01 g	0.1 g	0.2 g	0.5 g	1 g	2 g	5 g	5 g	10 g
Recommended Readability (min.)	0.001 g	0.005 g	0.01 g	0.02 g	0.05 g	0.1 g	0.2 g	0.2 g	0.5 g
Approvable Resolution	OIML Class II, up to 30,000e								
Frame Material	Stainless steel AISI304								
Load Plate Material	Stainless steel AISI304/316								
Load Cell	Monobloc technology in stainless steel housing								
Recommended Resolution (max.)	up to 750,000d								
Ingress Protection	IP67/IP68								
More Information	**www.mt.com/PBK9**								

BBA236 Bench Scale Series
Durable – Reliable – Economical

The BBA236 stainless steel scale is a robust and easy-to-operate all-in-one solution. It is a perfect fit for basic applications in dry and short-time wet industrial environments. The user-friendly terminal promotes fast operation and measurably improve production efficiency.

▶ **www.mt.com/BBA236-eu**

In addition to five tactile and responsive standard keys, the scale features two freely definable function keys. This allows fast and easy switching between functions and ensures quick set-up and easy use.

Highly Visible Display
For excellent readability under any light condition, the BB236 scale features a large, 60 mm high LCD display with an adjustable white backlight.

Versatile Usage
The scale includes an RS232 interface, which allows communication with a printer or PC. Its stainless steel enclosure is both stylish and functional.

Rugged and Easy to Clean
The IP65 protected platform, with its open, sturdy and straightforward design, allows efficient cleaning and helps to reduce possible bacterial contamination.

BBA236 Bench Scales
For a Variety of Applications

Display	7-segment LCD Display					
Material	Scale: stainless steel, AISI304					
Power Supply	85-264 VAC, Optional: Rechargeable NiMH battery					
Data Interfaces	RS232 (Standard)					
	Maximum Capacity					
Platform / Load Plate Size	**3 kg**	**6 kg**	**15 kg**	**30 kg**	**60 kg**	**150 kg**
A 240 x 300 mm	•	•	•			
BB 300 x 400 mm				•	•	
B 400 x 500 mm				•	•	•
Approvable Readablity	1 g	2 g	5 g	10 g	20 g	50 g
Recommended Readability (min.)	0.2 g	0.5 g	1 g	2 g	5 g	10 g
Approvable Resolution	OIML Class III, 3,000e					
Recommended Resolution (max.)	15,000d					
More Information	**www.mt.com/BBA236-eu**					

ICS226 Compact Scale Series
Mobile – Ergonomic – Compact

The ICS226 Compact Scale is a portable scale for weighing and portioning in food production and packaging applications. This full stainless-steel scale is IP65/IP67 protected and a good fit in any light wash-down application with a need for ruggedness and durability.
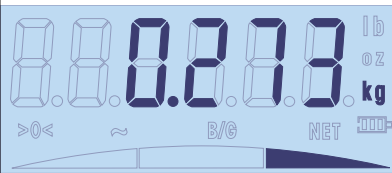
▸ **www.mt.com/ICS226**

Manufacturing Flexibility
Removable handles and a high-quality Ni-MH rechargeable battery make the ICS226 a fully portable and mobile scale for flexible operation everywhere in your facility.

Ergonomic and Rugged Keypad
The high-quality membrane keys and the duplicated Zero/Tare buttons provide long life and convenient operation.

Bright, Easy-Read Display
The ICS226 compact scale includes a large and highly visible LCD display and an intuitive graphic checkweighing indicator for easy readability.

ICS226 Compact Scales
For Simple Checkweighing Applications

Display	6 digit LCD Display, with white backlight		
Material	Scale: stainless steel, AISI 304		
Power Supply	100–240 VAC, Rechargeable 6V, Ni-MH battery		
Data Interfaces	RS232 (Standard)		
	Maximum Capacity		
Platform / Load Plate Size	**3 kg**	**6 kg**	**15 kg**
228 x 228 mm	•	•	•
Approvable Readablity	1 g	2 g	5 g
Recommended Readability (min.)	0.1 g	0.2 g	0.5 g
Approvable Resolution	OIML Class III, 3,000e		
Recommended Resolution (max.)	6,000d		
More Information	**www.mt.com/ICS226**		

Bench Platforms
For Wet and Harsh Environments

These weighing platforms are designed for demanding weighing tasks in harsh and hygienically sensitive environments.

▶ www.mt.com/ind-platforms

High Precision in Action

Unmatched Precision ✓
Robust Construction ✓

Watch the video to learn how the platform design enables the highest precision in production environments and how this can help you improve your weighing processes and ensure consistent quality, increase productivity and meet regulatory requirements.

▶ **www.mt.com/PBK9**

	PBK9(x) Premium platform for best-in-class performance.	**PBA430(x)** Analog platform for advanced applications.	**PBA429(x)** Analogue platform for standard applications.	**PBA426(x)** Analogue platform for standard applications.	**PBA226** Analogue platform for standard applications.
Applications	• Precision weighing & counting • Automated weight determination • Pharmaceutical processes	• Harsh wet-area weighing • Biotech and hygienic processes • Formulation and recipe weighing	• Harsh wet-area weighing • Chemical processes • Formulation and recipe weighing	• Wet-area weighing • Chemical processes • Formulation and recipe weighing	• Light wet area weighing • In-process quality control • Formulation and recipe weighing
Accuracy	★★★★ Highest precision	★★★☆ Advanced precision	★★☆☆ Standard precision	★★☆☆ Standard precision	★★☆☆ Standard precision
Versatility	★★★★ 9 capacities, 5 sizes	★★★★ 8 capacities, 8 sizes	★★☆☆ 5 capacities, 5 sizes	★★☆☆ 5 capacities, 5 sizes	★★☆☆ 6 capacities, 6 sizes
Process Integration	★★★★ Connects to terminal or direct to PLC	★☆☆☆ Digital scale interface for fast system integration (optional)	☆☆☆☆ –	☆☆☆☆ –	☆☆☆☆ –
Compliance Support	★★★★ Hygienic design, hazardous-area approved – Cat. 3	★★★☆ Hygienic design, hazardous-area approved – Cat. 2 & 3	★★☆☆ Hygienic design, hazardous-area approved – Cat. 2	★★☆☆ Hygienic design, hazardous-area approved – Cat. 2	★☆☆☆ Hygienic design
Resolution	Approvable: up to 30,000e OIML Class II Recommended (max.): </=750,000d	Approvable: 2 x 3,000e OIML Class III Recommended (max.): </=30,000d	Approvable: 3,000e OIML Class III Recommended (max.): 15,000d	Approvable: 3,000e OIML Class III Recommended (max.): 15,000d	Approvable: 3,000e OIML Class III Recommended (max.): 15,000d
Capacity Range	0.6 kg up to 300 kg	3 kg up to 600 kg	3 kg up to 60 kg	3 kg up to 60 kg	3 kg up to 150 kg
Platform Sizes (mm)	210 x 250 up to 600 x 800	240 x 300 up to 600 x 800	240 x 300 up to 400 x 500	240 x 300 up to 400 x 500	240 x 300 up to 400 x 500
Ingress Protection	IP67/IP68	IP68/IP69k	IP68/IP69k	IP65/IP67	IP65
Weighing Platform Material	Frame: Stainless steel AISI304 Load plate: Stainless steel AISI304/316	Frame: Stainless steel AISI304 Load plate: Stainless steel AISI304/316	Frame: Stainless steel AISI304 Load plate: Stainless steel AISI304	Frame: Stainless steel AISI304 Load plate: Stainless steel AISI304	Frame: Stainless steel AISI304 Load plate: Stainless steel AISI304
Detailed Product Information	Monobloc technology in stainless-steel housing	Stainless steel, hermetically sealed	Stainless steel, hermetically sealed	Stainless steel potted	Aluminum potted
Approvals & Certificates	OIML, NTEP, GMP, EHEDG, IECEx, ATEX, FM	OIML, NTEP, ATEX	OIML, NTEP, ATEX, FM	OIML, NTEP, ATEX, FM	OIML, NTEP
More Information	**See page 78** or **www.mt.com/PBK9**	**See page 80** or **www.mt.com/PBA430**	**See page 82** or **www.mt.com/PBA429**	**See page 82** or **www.mt.com/PBA426**	**See page 82** or **www.mt.com/PBA226**

Requirement fulfillment scoring: ★★★★ very good   ★★★☆ good   ★★☆☆ fair   ★☆☆☆ limited   ☆☆☆☆ none

PBK989 Bench Platform Series
For Precision in Any Environment

For applications that require high reliability with industry leading metrological performance, PBK989 high-precision bench platforms, with resolutions of up to 750,000 divisions, are the right choice. Their unique platform construction makes them suitable for a variety of challenging environments, including areas with high humidity, that need regular cleaning or are classified as hazardous.
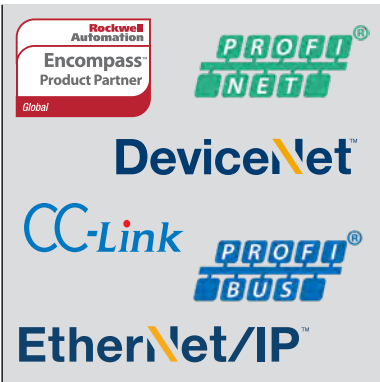
▶ **www.mt.com/PBK9**

The Monobloc load cell at the core of the PBK9 weighing platform guarantees the highest precision and reliability. The robust load-cell housing features integrated overload protection and durable mechanical interfaces for many years of intensive use.

**Increased Throughput
for Fast Processes**
Industry-leading stabilization times make the platforms suitable for high-speed weighing processes.

Safe in Hazardous Environments
The platforms are approved for top performance in gaseous, dusty environments - Category 3/ Division 2.

**Direct Connectivity
for Safe Processes**
PBK9 APW weighing platforms can be directly connected via plug-in cables to many process-control systems.

PBK9 High-Precision Bench Platforms
For Outstanding Accuracy

Frame Material									
	Stainless steel AISI304								
Load Plate Material	Stainless steel AISI304/316								
Load Cell	Monobloc technology in stainless-steel housing								
	Maximum Capacity								
Platform / Load Plate Size	**0.6k g**	**3 kg**	**6 kg**	**15 kg**	**30 kg**	**60 kg**	**120 kg**	**150 kg**	**300 kg**
XS 210 x 250 / 130 x 160 mm	•								
A 275 x 345 / 240 x 300 mm		•	•						
AB 280 x 350 mm				•	•	•			
B 400 x 500 mm						•	•		
CC 600 x 800 mm								•	•
Approvable Readablity	0.01 g	0.1 g	0.2 g	0.5 g	1 g	2 g	5 g	5 g	10 g
Recommended Readability (min.)	0.001g	0.005 g	0.01 g	0.02 g	0.05 g	0.1 g	0.2 g	0.2 g	0.5 g
Approvable Resolution	OIML Class II, up to 30,000e								
Recommended Resolution (max.)	up to 750,000d								
More Information	**www.mt.com/PBK9**								

IP67 IP68 OIML NTEP IECEx Ex FM APPROVED GMP

PBA430(x) Bench Platform Series
When Cleanliness Really Matters

For wet and harsh applications that require high weighing reliability, the PBA430 full stainless steel platform series, featuring a hermetically sealed load cell is the right choice. Easy to clean, it supports internal quality management systems in the food, pharmaceutical and chemical industries. The PBA430x can also be used in hazardous areas.

▶ **www.mt.com/PBA430**

PBA430(x) weighing platforms are manufactured according to recognized EHEDG and NSF guidelines. They can be used in hygienically sensitive areas with HACCP requirements and when working to meet GMP standards.

Fully Protected Load Cell
The high performance, hermetically sealed stainless steel load cell grants a protection of IP68/IP69k. It can withstand any harsh wash down procedure.

Rugged and Reliable
The PBA430 design features a seamless welded construction and optimally placed overload stops to provide the best possible protection against load cell damage.

Safe in Hazardous Environments
These platforms are approved for top performance in gaseous and dusty environments – Category 2 and 3.

PBA430(x) Bench Platforms
For Hygienic Sensitive Applications

Frame Material	Stainless steel AISI304							
Load Plate Material	Stainless steel AISI304/316							
Load Cell	Hermetically sealed stainless steel							
	Maximum Capacity							
Platform Size	**3 kg**	**6 kg**	**15 kg**	**30 kg**	**60 kg**	**150 kg**	**300 kg**	**600 kg**
A 240 x 300 mm	•	•	•					
BB 300 x 400 mm				•	•			
B 400 x 500 mm				•	•	•		
BC 500 x 650 mm					•	•	•	
CC 600 x 800 mm					•	•	•	•
QA 229 x 229 mm		•						
QB 305 x 305 mm			•	•	•			
QC 457 x 457 mm					•	•		
Approvable Readablity	1 g	1 / 2 g	2 / 5 g	5 / 10 g	10 / 20 g	20 / 50 g	50 / 100 g	100 / 200 g
Recommended Readability (min.)	0.1 g	0.2 g	0.5 g	1 g	2 g	5 g	10 g	20 g
Approvable Resolution	OIML Class III, 2 x 3,000e							
Recommended Resolution (max.)	30,000d							
More Information	www.mt.com/PBA430							

IP68 IP69k OIML NTEP Ex EHEDG NSF GMP

PBA429(x), PBA426(x) & PBA226 Platforms
For the Most Flexibility

These platform series offer solutions for a wide range of weighing tasks in anything from light wet to harsh washdown environments. They are a perfect fit in any food, chemical or pharmaceutical processing application in which there is a need for durability and cleanliness. The PBA429(x) and the PBA426(x) can also be used in hazardous areas.

▶ **www.mt.com/PBA429**

This stainless-steel platform series was designed according to hygienic standards. The open, sturdy and straightforward mechanical design allows access to any part of the platform for efficient cleaning.

Hermetically Sealed Load Cell
This load cell makes the PBA429(x) series the perfect choice for applications in extremely harsh conditions. It withstands steam and high pressure washdown.

Stainless-Steel Load Cell
This load cell makes the PBA426(x) series a good choice for any light washdown application. It features excellent resistance against water and humidity.

High-End Aluminum Load Cell
This load cell makes the PBA226 series applicable for light hose-down applications. It features moderate protection against water and humidity.
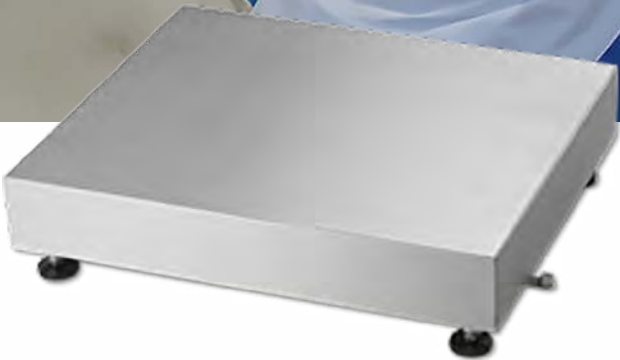
PBA429(x), PBA426(x) & PBA226 Platforms
For a Variety of Applications

Frame Material	Stainless steel AISI304					
Load Plate Material	Stainless steel AISI304					
Load Cell	Hermetically sealed, stainless steel & aluminum					
	Maximum Capacity					
Platform Size	**3 kg**	**6 kg**	**15 kg**	**30 kg**	**60 kg**	**150 kg**
A 240 x 300 mm	●	●	●			
BB 300 x 400 mm				●	●	
B 400 x 500 mm				●	●	●*
QA 229 x 229 mm	●	●				
QB 305 x 305 mm			●	●		
QC 457 x 457 mm					●*	●*
Approvable Readablity	1 g	2 g	5 g	10 g	20 g	20 g
Recommended Readability (min.)	0.2 g	0.5 g	1 g	2 g	5 g	5 g
Approvable Resolution	OIML Class III, 3,000e					
Recommended Resolution (max.)	15,000d					
More Information	**www.mt.com/PBA429**					

*PBA226 series only

IP65 IP67 IP68 IP69k   OIML   NTEP   ⟨Ex⟩   FM APPROVED
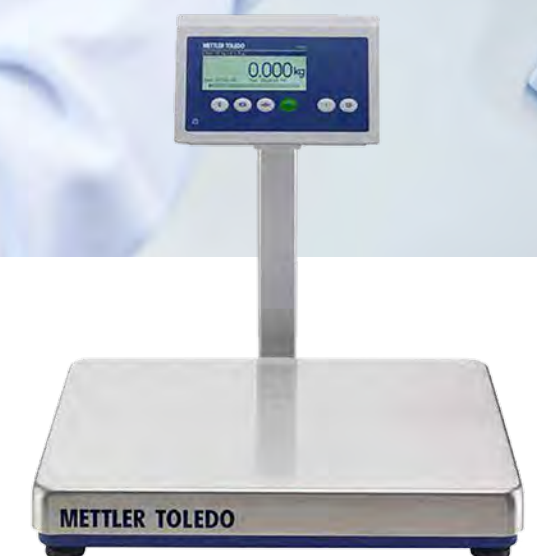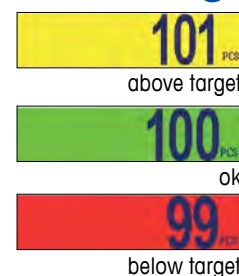
Scales and Platforms
For Dry and Dusty Environments

These series offer a wide range of scales and platforms designed to integrate easily into your weighing process, whether you need checkweighing, counting or quality-assurance applications. Select your optimal combination and raise your throughput. At the same time, you will increase process security and improve product quality.

▸ **www.mt.com/bench-scales**

Save time and money with our smart colored display. colorWeight® makes completeness checks, portioning, classifying and counting simple and fast while reducing error risk. The display indicates at-a-glance if weight or count is below, within or above target.

colorWeight®

101 PCS
above target

100 PCS
ok

99 PCS
below target

Premium & Advanced
Obtain accurate counting and checkweighing results in dust-contaminated environments. Benefit from full-graphic display technology, an alphanumeric keypad and multiple interfaces.

Industrial Basic Series
Industrial basic scales feature quality at attractive prices. They are suitable for basic food, chemical or manufacturing applications in dry and dusty environments.

Weighing Platforms
Solutions are available from 0.6 to 600 kg and thanks to innovative measuring technology, accuracies as low as 1mg can be reached.

Optimize Your Processes

Speed counts in today's competitive environment. Manufacturers are expected to produce error-free, high-quality products in record time. METTLER TOLEDO scales and platforms provide solutions for fast and accurate weighing, mixing, counting and checkweighing to increase your throughput.

Built not only to offer superior weighing performance, these instruments are designed for a long working life in rugged dry and dust-contaminated environments.

Intuitive user menus and available data-management systems allow proven traceability of your weighing processes, capturing everything from definition of articles and tolerances to tare values.

The intuitive user menus and the superior weighing performance increase the throughput and allow for fast and accurate results.

IP54 IP65 OIML NTEP CE CSA c UL us IECEx Ex FM APPROVED

Bench Scales for Dry Environments
Comparison of Standard Configurations

Scales with ingress protection up to IP65 are designed for demanding weighing tasks in dry and dust-contaminated environments.

▶ **www.mt.com/dry-bench-scales**

DatabICS Scale Management Software

DatabICS, for use with ICS4 and ICS6 scales, allows the management, set-up and retrieval of stored articles on your PC. Furthermore, the software allows for fast and easy label creation.

▶ **www.mt.com/ind-databics**

	ICS685 Premium bench scale for demanding applications.		**ICS4_5** (ICS465, ICS445 & ICS425) Bench scale for advanced applications.		**BBA231** Cost effective bench scale for basic applications.		**ICS241** Mobile compact scale for simple applications.	
Applications	• Intuitive counting and totalizing • Smart checkweighing & portioning • Fast classifying and average weighing		• Accurate counting and totalizing • Advanced checkweighing and portioning • Fast average weighing		• Basic weighing and checkweighing • Counting and totalizing • Average weighing		• Basic weighing • Simple counting	
Accuracy	★★★★	Highest precision	★★★★	Highest precision	★★☆☆	Standard precision	★★☆☆	Standard precision
Versatility	★★★★	9 capacities, 8 sizes	★★★☆	9 capacities, 8 sizes	★★☆☆	6 capacities, 5 sizes	★★☆☆	4 capacities, 1 size
Process Integration	★★★★	Up to 4 scale and 4 data interfaces	★★★☆	Up to 2 scale and 2 data interfaces	★★☆☆	1 standard & 1 optional interface	★☆☆☆	1 standard interface
Data Management	★★★★	Database stores up to 5,000 articles	★★☆☆	Database stores up to 100 articles	☆☆☆☆	–	★☆☆☆	Database stores up to 50 articles.
Compliance Support	★★★★	Alibi memory and user management functionality	★★★☆	Alibi memory and user prompting functionality	☆☆☆☆	–	☆☆☆☆	–
Display	Color TFT (320 x 240) with 3 display layouts. colorWeight® functionality		Graphic LCD display with 3 display layouts. colorWeight® functionality		7-segment LCD display with white backlight		Graphic LCD display with white backlight	
Interfaces	RS232, RS422/485, USB, Ethernet, WLAN, Digital I/O (4 in- & 4 outputs)		RS232, RS422/485, USB, Ethernet, WLAN, Digital I/O (4 in- & 4 outputs)		RS232, RS422/485, USB Device, Digital I/O		RS232	
Resolution (depending on platform)	Approvable: </=60,000e OIML Class II Recommended (max.): </= 610,000d		Approvable: </=60,000e OIML Class II Recommended (max.): </= 610,000d		Approvable: 3,000e OIML Class III Recommended (max.): </=15,000d		Approvable: 3,000e OIML Class III Recommended (max.): </=30,000d	
Capacity Range	0.6 kg up to 600 kg		0.6 kg up to 600 kg		6 kg up to 300 kg		3 kg up to 30 kg	
Platform Sizes (mm)	206 x 247 up to 600 x 800		206 x 247 up to 600 x 800		240 x 300 up to 600 x 800		230 x 306	
Ingress Protection	IP54; optional IP65		IP54; optional IP65		IP54		–	
Approvals & Certificates	OIML, NTEP, CE, CSA C US		OIML, NTEP, CE, CSA C US		OIML, NTEP, CE, UL		OIML, CE, UL	
More Information	See page 88 or **www.mt.com/ICS685**		See page 88 or **www.mt.com/ICS465**		See page 92 or **www.mt.com/BBA231**		See page 94 or **www.mt.com/ICS241**	

Requirement fulfillment scoring: ★★★★ very good   ★★★☆ good   ★★☆☆ fair   ★☆☆☆ limited   ☆☆☆☆ none

ICS Bench Scale Series
When Productivity and Flexibility Counts

The ICS685, ICS465, ICS445, ICS435 and ICS425 bench and compact scales series can be used for a variety of applications including counting, over/under checkweighing, classifying and filling. The rugged design makes these scales suited for dry and dust-contaminated environments in a variety of industries, such as metal fabrication, plastic molding and electronics.

▶ **www.mt.com/dry-bench-scales**

When verifying inventory, packaging or production quantities, every part or piece is important. The ICS689 & ICS4_5 scale family provides solutions to make parts-counting applications fast, accurate and cost-effective.

**colorWeight®
Speeds Up Production**
Save time and money with the smart colored display that makes weighing applications faster and less error-prone.

**Mobile Operation
for Flexible Processes**
An optional WLAN interface and long lasting Li-Ion battery pack allows flexible operation anywhere in the facility.

Fast, Secure Data Management
The embedded database stores up to 5,000 articles and 300,000 weighing records for secure traceability and compliance.

The Right Solution Tailored to Your Specific Needs

The ICS685, ICS465, ICS445, ICS435 and ICS425 product family is a highly modular product range consisting of a large variety of terminals and platforms to best fulfill your specific requirements. From simple weighing to integrated solutions with multiple components including third-party devices, a wide range of configurations are possible.

Connect your scale via Ethernet, WLAN or USB for easy data-transfer. Add a barcode reader or other peripheral for secure material identification.

IP54 IP65 OIML NTEP CE CSA

ICS Bench Scale Series
Configurations for Dry Environments

ICS685, ICS465, ICS445, ICS435 and ICS425 compact scales are the perfect fit for your applications in dry or dusty environments. Whether you need a scale for simple weighing, advanced counting or quality control applications, you will find the perfect solution for your specific needs.

▸ **www.mt.com/dry-bench-scales**

1 Choose an application / terminal

Model	ICS425	ICS435	ICS445	ICS465	ICS685
Applications	⤓	⤓	⤓ ⣿	⤓ ⣿ ±	⤓ ⣿ ± ⤓ ≣
Color TFT Display					●
colorWeight®				●	●
Configurable Soft Keys			●	●	●
Numeric (n) / Alphanumeric (a) Keypad		n		n	a
Additional Interface Options	1	1	1	1	3
Attachable Platforms	1	1	2	2	4*

* Maximum 2 analog, or 2 IDNet platforms respectively 1 analog plus 1 IDNet

⤓ Basic Weighing ⣿ Counting ± Over/Under Checkweighing ⤓ Filling/Dosing ≣ Classifying

General specifications

Resolution for Analog Platforms**	300,000d; 7,500e, OIML / 10,000d, NTEP
Display	**ICS4_5:** LCD liquid crystal graphical display with backlighting **ICS685:** Color TFT display 320 x 240 pixels
Keypad	Tactile-touch membrane keypad (PET), scratch-resistant material
Housing	Die-cast aluminium
Protection	IP65
Power	100–240 VAC; optional battery 12 V / 2.5 A
Standard Interfaces	1 RS232

** for digital platforms, the resolution is defined by the respective platform

2 Interface options / accessories

Optional Data Interfaces	RS232, RS422/485, USB device/host, Ethernet, WLAN, Digital I/O (4 Inputs and 4 Outputs)
Optional Scale Interfaces	digital SICSpro, digital IDNet, analog (max. 2 analog, or 2 IDNet resp. 1 analog and 1 IDNet)
Accessories	Choose from various accessories such as wall bracket, columns/stands, roller tops, printers, battery packs, relays for digital I/O, barcode scanners and much more.

## 3 Combine with the best fit platform for dry environment

PBK785	Maximum Capacity					
Platform/Load Plate Size	0.6 kg	3 kg	6 kg	6 kg	15 kg	35 kg
XS 206 x 247 (130 x 160 mm)	●	●	●			
SM 206 x 247 (200 x 240 mm)				●		
LA 247 x 357 (240 x 350 mm)					●	●
Approvable Readability	0.01 g	0.1 g	0.1 g	1 g	1 g	1 g
Recommended Readability (min.)	0.001 g	0.01 g	0.01 g	0.1 g	0.1 g	0.1 g
Frame Material	Dye-Casted aluminum					
Load Plate Material	Stainless steel AISI304					
Load Cell	Monobloc technology					
Approvable Resolution	OIML Class II, up to 60,000e					
Recommended Resolution (max.)	up to 610,000d					
Ingress Protection	IP65					

PBD555	Maximum Capacity			
Platform/Load Plate Size	3k g	6 kg	15 kg	35 kg
SM 206 x 247 (200 x 240 mm)	●	●		
LA 247 x 357 (240 x 350 mm)			●	●
Approvable Readability	0.5 g	1 g	2 g	5 g
Recommended Readability (min.)	0.05 g	0.1 g	0.2 g	0.5 g
Frame Material	Dye-Casted aluminum			
Load Plate Material	Stainless steel AISI304			
Load Cell	Digital aluminum potted			
Approvable Resolution	OIML Class III, up to 7,500e			
Recommended Resolution (max.)	up to 75,000d			
Ingress Protection	IP65			

PBD655	Maximum Capacity						
Platform Size	6 kg	12 kg	30 kg	60 kg	120 kg	300 kg	600 kg
A 240 x 300 mm	●	●					
BB 300 x 400 mm			●	●			
B 400 x 500 mm			●	●			
BC 500 x 650 mm			●	●	●		
CC 600 x 800 mm				●	●	●	●
Approvable Readability	1 g	2 g	5 g	10 g	20 g	50 g	100/200 g
Recommended Readability (min.)	0.1 g	0.2 g	0.5 g	1 g	2 g	5 g	10 g
Frame Material	Powder coated, carbon steel						
Load Plate Material	Stainless steel AISI304						
Load Cell	Digital aluminum potted						
Approvable Resolution	OIML Class III, 6,000e						
Recommended Resolution (max.)	60,000d						
Ingress Protection	IP65						
More Information	**www.mt.com/PBD655**						
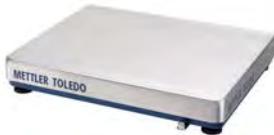
BBA231 Bench Scale Series
Fast – Versatile – Economical

The BBA231 bench scale is a cost-effective, easy-to-operate one-for-all solution and a perfect fit for basic applications in dry and dust-contaminated environments. The user-friendly terminal with its highly visible display promotes quick operation and can measurably improve production efficiency.

▶ **www.mt.com/BBA231**

In addition to five tactile and responsive standard keys, the scale features two free definable function keys. This allows fast and easy switching between functions and ensures quick set-up and easy use.

Highly Visible Display
For excellent readability under any light condition, the BB231 scale features a large, 60 mm high LCD display with an adjustable white backlight.

Versatile Usage
The scale includes an RS232 interface which allows communication with a printer or PC. Its plastic enclosure is both stylish and functional.

Robust Construction
The rugged platform construction ensures durability and accurate weighing results. Overload stop protects the load cell from damage.

BBA231 Bench Scale
For a Varity of Applications

| Display	7-segment LCD Display					
Material	Load plate: AISI304					
Power Supply	85–264 VAC, 6AA Batteries					
Data Interfaces	RS232					
	Maximum Capacity					
Platform / Load Plate Size	**6 kg**	**15 kg**	**35 kg**	**60 kg**	**150 kg**	**300 kg**
A 240 x 300 mm	•	•				
BB 300 x 400 mm			•	•		
B 400 x 500 mm				•	•	
BC 500 x 650 mm				•	•	•
CC 600 x 800 mm				•	•	•
Approvable Readablity	2 g	5 g	10 g	20 g	50 g	100 g
Recommended Readability (min.)	0.5 g	1 g	2 g	5 g	10 g	20 g
Approvable Resolution	OIML Class III, 3,000e					
Recommended Resolution (max.)	15,000d					
More Information	**www.mt.com/BBA231**					

ICS241 Compact Scale Series
Convenient – Smart – Efficient

The ICS241 is a versatile counting and simple-weighing scale for various industrial environments, including production, warehouse & logistics, packaging and quality control. It offers an easy-to-use interface with an intuitive LCD display and alphanumeric keypad for easy, fast operation.

▸ **www.mt.com/iCS241**

The ICS241 offers configurable soft keys for fast access to key functions, such as sampling and counting. The numeric keypad allows for fast input of tare or sample weights.
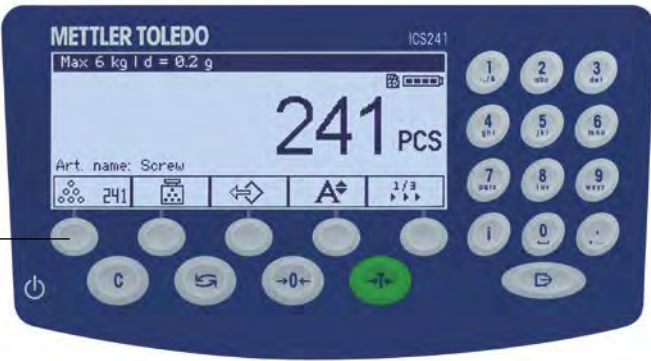
Smart Database Management
The transaction database can save each counting/weighing result and up to 30,000 entries via SD card for traceability.

Batteries for Mobile Operation
The ICS241 features an easily accessible battery compartment with six D-size dry or rechargeable batteries for self-contained operation.

Intuitive LCD Display
The large graphic LCD display shows text and graphics for excellent operator guidance. All relevant information is shown on one screen.

ICS241 Counting Scales
For Simple Counting

Display	Graphic LCD display, with white backlight			
Material	Scale: plastic			
Power Supply	6D size batteries or 100–240VAC over adapter			
Data Interfaces	RS232			
	Maximum Capacity			
Platform / Load Plate Size	**3 kg**	**6 kg**	**15 kg**	**30 kg**
228 x 228 mm	•	•	•	•
Approvable Readablity	1 g	2 g	5 g	10 g
Recommended Readability (min.)	0.1 g	0.2 g	0.5 g	1 g
Approvable Resolution	OIML Class III, 3,000e			
Recommended Resolution (max.)	30,000d			
More Information	**www.mt.com/ICS241**			

Bench Platforms
For Dry and Dusty Environments

Weighing platforms designed for your most demanding weighing tasks in dry and dust-contaminated environments.

▶ **www.mt.com/ind-platforms**

High Precision in Action

Watch the video to learn how the platform design enables the highest precision in production environments and how this can help you improve your weighing processes to ensure consistent quality, increase productivity and meet regulations.

▶ **www.mt.com/PBK9**

	PBK9(x)	**PBD655**	**PBA655(x)**	**PBA220**
	Premium platform for best-in-class performance.	Digital platform for advanced applications.	Analogue platform for standard applications.	Analogue platform for basic applications.
Applications	• Precision weighing and counting • Automated weight determination • Net content control	• In-process quality control • Automated weight determination • Net content control	• Sorting and tracking • Shipping and manifesting	• Sorting and tracking • Shipping and manifesting
Accuracy	★★★★ Highest precision	★★★☆ Advanced precision	★★★☆ Advanced precision	★★☆☆ Standard precision
Versatility	★★★☆ 9 capacities, 5 sizes	★★★☆ 7 capacities, 5 sizes	★★★☆ 7 capacities, 5 sizes	★★★☆ 6 capacities, 9 sizes
Process Integration	★★★★ Connects to terminals or direct to PLC	★★★★ Connects to terminals or direct to PLC	☆☆☆☆ –	☆☆☆☆ –
Compliance Support	★★☆☆ Hazardous area approved – Cat. 3	☆☆☆☆ –	☆☆☆☆ –	☆☆☆☆ –
Resolution	Approvable: up to 30,000e OIML Class II Recommended (max.): 750,000d	Approvable: 6,000e OIML Class III Recommended (max.): </=60,000d	Approvable: 6,000e OIML Class III Recommended (max.): </=60,000d	Approvable: 3,000e OIML Class III Recommended (max.): </=15,000d
Capacity Range	60 kg up to 300 kg	6 kg up to 600 kg	6 kg up to 600 kg	6 kg up to 300 kg
Platform Sizes (mm)	400 x 500 up to 600 x 800	240 x 300 up to 600 x 800	240 x 300 up to 600 x 800	240 x 300 up to 600 x 800
Ingress Protection	IIP66 / IP68	IP65	IP65	IP65
Weighing Platform Material	Frame: powder coated carbon steel Load plate: stainless steel AISI304/316	Frame: powder coated carbon steel Load plate: stainless steel AISI304	Frame: powder coated carbon steel Load plate: stainless steel AISI304	Frame: powder coated carbon steel Load plate: stainless steel AISI304/316
Load Cell	Monobloc technology in stainless steel housing	Aluminum, potted	Aluminum, potted	Aluminum, potted
Approvals & Certificates	OIML, NTEP, IECEx, ATEX	OIML, NTEP	OIML, NTEP, FM	OIML, NTEP
More Information	See page 98 or **www.mt.com/PBK9**	See page 100 or **www.mt.com/PBD655**	See page 100 or **www.mt.com/PBA655**	**www.mt.com/PBA220**

Requirement fulfillment scoring: ★★★★ very good   ★★★☆ good   ★★☆☆ fair   ★☆☆☆ limited   ☆☆☆☆ none

PBK987 Bench Platform Series
For Precision in Dry Environments

For applications that require high reliability with industry-leading metrological performance, PBK987 high-precision bench platforms, with resolutions of up to 750,000 divisions, are the right choice. Their unique construction makes them suitable for a variety of challenging environments, including heavily dust-contaminated areas.
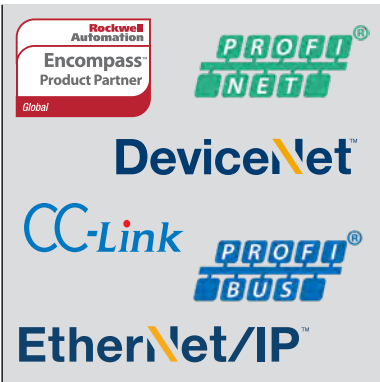
▶ **www.mt.com/PBK9**

The Monobloc load cell at the core of the PBK9 weighing platform guarantees the highest precision and reliability. The robust load-cell housing features integrated overload protection and durable mechanical interfaces for many years of intensive use.

Increased Throughput for Fast Processes
Industry-leading stabilization times make the platforms suitable for high-speed weighing processes.

Accurate Counting
Instead of using a separate reference scale for counting applications, one PBK9 with a fitting terminal (e.g. ICS685) can be used for the entire process.

Direct Connectivity for Safe Processes
PBK9 APW weighing platforms can be directly connected via plug-in cables to many process-control systems.

PBK9 High-Precision Bench Platforms
For Outstanding Accuracy

Frame Material	Stainless steel AISI304			
Load Plate Material	Stainless steel AISI304/316			
Load Cell	Monobloc technology in stainless steel housing			
	Maximum Capacity			
Platform / Load Plate Size	**60 kg**	**120 kg**	**150 kg**	**300 kg**
B 400 x 500 mm	•	•		
CC 600 x 800 mm			•	•
Approvable Readablity	2 g	5 g	5 g	10 g
Recommended Readability (min.)	0.1 g	0.2 g	0.2 g	0.5 g
Approvable Resolution	OIML Class II, up to 30,000e			
Recommended Resolution (max.)	up to 750,000d			
More Information	**www.mt.com/PBK9**			

IP67 IP68 OIML NTEP IECEx Ex FM APPROVED

PBD655 and PBA655(x) Bench Platforms
For Reliability in Dry Environments

The digital **PBD655** and analog **PBA655(x)** bench-scale platform-series are designed for durability and reliability. They are the perfect choice for dry and dust-contaminated environments, such as receiving, inspection, manufacturing and warehousing. The platforms feature resolutions of up to 60,000 divisions.

▶ **www.mt.com/PBD655**

The PBD655 platform series is a rugged digital device designed for simplicity and dependability. It features an approvable resolution of OIML 6,000e. This provides optimal accuracy while still being cost-effective.

Ready to Operate in Seconds
The PBD655 platform is a true digital, pre-calibrated device designed for simplicity. Plug the platform into a suitable terminal and start weighing.

High Durability
The extremely robust platform design features an approvable resolution of OIML 6,000e for optimal weighing and counting precision.
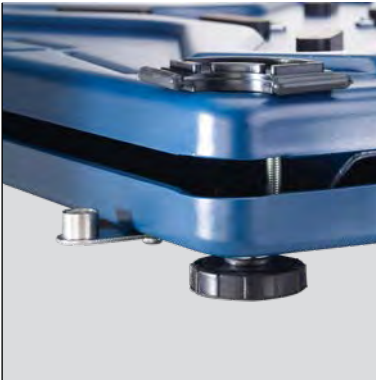
Damage Protected
The PBA655 platform features several overload stops to ensure the best possible load cell protection and long life.

PBD655 and PBA655(x) Bench Platforms
For Out-of-the-box Weighing

Frame Material	Powder-coated carbon steel						
Load Plate Material	Stainless steel AISI304						
Load Cell	Digital or analog aluminum						
	Maximum Capacity						
Platform Size	**6 kg**	**12 kg**	**30 kg**	**60 kg**	**120 kg**	**300 kg**	**600 kg**
A 240 x 300 mm	•	•					
BB 300 x 400 mm			•	•			
B 400 x 500 mm				•	•		
BC 500 x 650 mm				•	•	•	
CC 600 x 800 mm				•	•	•	•
Approvable Readablity	1 g	2 g	5 g	10 g	20 g	50 g	100 / 200 g
Recommended Readability (min.)	0.1 g	0.2 g	0.5 g	1 g	2 g	5 g	10 g
Approvable Resolution	OIML Class III, 6,000e						
Recommended Resolution (max.)	60,000d						
More Information	**www.mt.com/PBD655**						
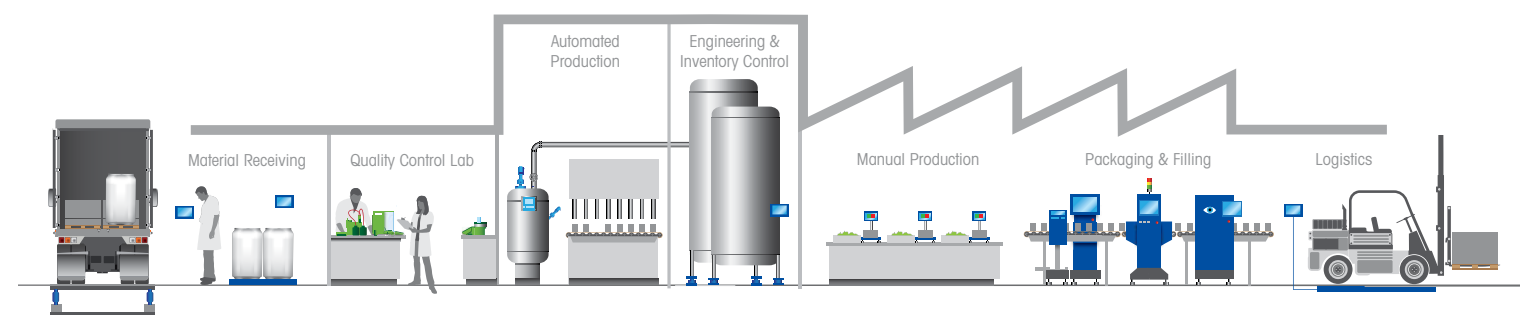
Floor, Low-Profile and Platform Scales

4

Our Solution
For Your Production

Floor Scales and Platforms
For Dry, Wet and Harsh Environments

Our versatile floor and platform scales provide you with the highest precision, reliability and durability for a variety of heavy-duty applications in industrial environments. Easy to clean and move, they can be configured for ground or pit weighing.
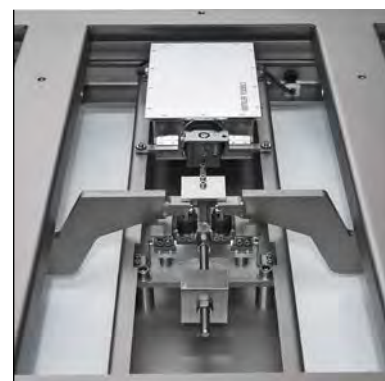
▶ **www.mt.com/floor-scales**

METTLER TOLEDO floor and platform scales are durable and reliable in industrial settings thanks to rocker-foot suspension and an installation frame that transfers vertical load. Their hygienic design includes a lift deck, making these scales extremely easy to clean, while a low profile and wheel set enables easy handling and flexibility.

Advanced Technology
A MonoBloc load cell and hybrid platform allow high-precision weighing with resolutions up to 30,000e in weights from 300 kg to 30,000 kg.

Hygienic Design
These scales are ideal for hygienic applications and quick wash-down due to smooth surfaces, washout areas, a lift deck and an IP69k rating.
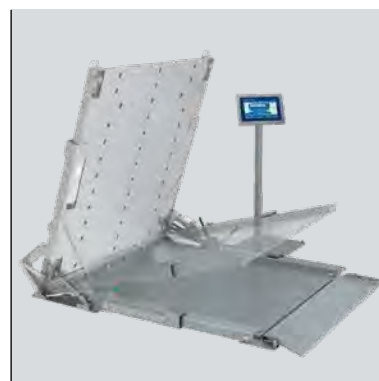
Low-Profile Lift Deck
Easy to load, lift and clean, these scales enable mobile weighing for greater flexibility and productivity.

Built for Your Specific Applications

Our versatile platform structures are a great fit for applications that require easy cleaning, moving and loading. They are designed for heavy-duty, high-precision weighing in food, pharma, chemical and manufacturing settings.

- Models in stainless and painted mild steel
- Smooth and patterned surface options
- Rocker-foot suspension
- Low profile lift deck; optional wheels for mobility
- Hermetically sealed load cell rated IP68 / IP69k
- Hygienic design
- MonoBloc weighing cell and hybrid leveling system
- Also available as pallet and pallet truck scales

IP68 IP65 Ex OIML GMP

Ultra-Low Profile Platforms
Quick, Safe, & Easy Loading

Our ultra-low profile weighing platforms are designed for easy loading and cleaning in a space-saving construction with no pit required. They offer reliable weighing performance in dry, wet/wash-down and hygienic environments depending on platform structures, materials and finishes.

▶ **www.mt.com/PUA579**

Click the Easy-Finder to get the right scale to meet your needs:

The PUA579 floor scale meets the highest requirements in hygienic sensitive areas.

▶ **www.mt.com/PUA579**

	PUA579(x) / PUA574	**2888 Static Mild Steel / Stainless Steel**	**2888 Portable Mild Steel / Stainless Steel**	**PUA669**
	Low profile for your dry, wet, hygienic or hazardous environment. Easy loading.	Stationary ultra-low profile floor scale designed for quick, safe, and easy loading.	Portable Ultra-low profile floor scale designed for quick, safe, and easy loading.	Ultra-low profile floor scale designed for quick, safe, and easy loading.
Applications	• Basic and precision weighing • Filling and formulation • Bulk material handling	• Batching • Filling	• Batching • Filling	• Sanitary • Filling and formulation • Bulk material handling • Wet and hygienic material weighing
Accuracy	Reliable weighing; improved weighing consistency	Advanced precision	Advanced precision	Advanced precision
Versatility	3 capacities, 2 sizes, optional free sizes	4 capacities, 6 sizes	4 capacities, 6 sizes	4 capacities, 5 sizes
Process Integration	Analog or digital interface for fast system integration	Analog interface	Analog interface	Analog interface
Compliance Support	Hygienic design; GMP; hazardous area approved – Cat. 2 & 3	Hygienic design, Hazardous area approved, FM Div.1, Div. 2	Hygienic design, Hazardous area approved, FM Div.1, Div. 2	Hygienic design, Hazardous area approved, FM Div.1, Div. 2
Resolution	Approvable: 2 or 3 x 3,000e multi range, 2 x 3,000e multi interval, 6,000e OIML Class III Recommended (max.): 30,000d	NTEP Class 3, 5,000d	NTEP Class 3, 5,000d	NTEP Class 3, 5,000d
Capacity Range (kg)	300 up to 1,500	600 to 3,000	600 to 1,500	300 to 3,000
Platform Size (in)	24 x 24 to 48 x 60	24 x 24 to 48 x 60	24 x 24 to 42 x 42	30 x 30 to 48 x 60
Ingress Protection	IP68 / IP65	IP69K	IP69K	IP69K
Weighing Platform Material	Stainless steel AISI 304 or 316 option / carbon steel	Two-part, epoxy-painted mild steel, 304 stainless steel, or 316 stainless steel	Two-part, epoxy-painted mild steel, 304 stainless steel, or 316 stainless steel	304 stainless steel (316 stainless steel optional)
Load Cell	Stainless steel, hermetically sealed, strain gage	Hermetically sealed stainless steel, four 350-ohm load cells	Hermetically sealed stainless steel, four 350-ohm load cells	Hermetically sealed stainless steel, four 350-ohm load cells
Compliance Approvals	OIML, GMP, ATEX	FM, CSA, Ex, ATEX	FM, CSA, Ex, ATEX	FM, CSA, Ex, ATEX
Special Features	Many options	Rocker pin suspension, High durability	Rocker pin suspension, High durability	Rocker pin suspension, High durability

Durable and Accurate Platforms
Precise Weighing in Any Environment

Accurate weighing helps you manage raw materials, ensure compliance with regulations, and improve your product quality. When in need of reliability and accuracy, the wide range of sizes and capacities of durable and accurate floor scales make them suitable for a variety of applications and industries.

▶ **www.mt.com/floor-scales**

	2256 Mild Steel / Stainless Steel	**2158 Mild Steel / Stainless Steel**	**PFK988 Configured / PFK989 Configured**	**PFA261 / PFA266**
	Stainless and mild steel. Built for rugged environments and quick installation.	Stainless and mild steel. Designed to last and provide unparalleled versatility.	Stainless and mild steel platform fit for dry, wet, and wash-down environments.	Safety tread plate designed for basic weighing and general use.
Applications	• Basic and precision weighing • Filling and formulation • Bulk material handling	• Basic and precision weighing • Filling and formulation • Bulk material handling	• Precision weighing • Automated weight determination • Chemical and pharma processes	• Basic weighing • Bulk material handling • Inventory control
Accuracy	Advanced precision	Advanced precision	Highest precision weighing	Standard precision
Versatility	4 capacities, 6 sizes	6 capacities, 7 sizes	4 capacities, 4 sizes	4 capacities, 3 sizes
Process Integration	Analog interface	Analog interface	Digital interface	Analog interface
Compliance Support	Hygienic design, Hazardous area approved, FM Div.1, Div. 2	Hygienic design, Hazardous area approved, FM Div.1, Div. 2	GMP; hazardous area approved – IECEx, ATEX Cat. 2&3, FM Div 1/2	None
Resolution	NTEP Class 3, 5,000d	NTEP Class 3, 5,000d	NTEP class 3 - 10,000d, class 2 – 30,000d	NTEP class 3 - 5,000d
Capacity Range (kg)	1K to 10K	300 to 20K	300 to 3,000	1000 to 6,000
Platform Size (in)	36 x 36 to 84 x 60	30 x 30 to 84 x 60	36 x 48 to 60 x 60	36 x 36 to 60 x 60
Ingress Protection	IP69K	IP69K	IP66/68	IP67
Weighing Platform Material	Painted mild steel, 304 stainless steel	Painted mild steel, 304 stainless steel	304 stainless steel, mild steel powder coated, mild steel galvanized	Epoxy-painted carbon steel, 304 stainless steel
Load Cell	Model 745A hermetically sealed stainless steel, 2mV/V load cells	Model 745A hermetically sealed stainless steel, 2mV/V load cells	Model 745A hermetically sealed stainless steel, 2mV/V load cells	Four SLB215 load cells, nickel-plated alloy steel; hermetically sealed; 350 ohms, 2mV/V output
Special Features	Rocker foot suspension, medium duty	Rocker pin suspension, high durability	Lift deck or removable deck plate	Threaded foot suspension, light duty, safety tread plate

Hygienic and Easy to Clean
Designed for Hygienic Demands

Excellent metrology combined with high reliability and easy handling makes these platforms ideal for sanitary applications. Easy-raise lift decks allow quick cleaning around and beneath the platform, meeting your demands for hygiene as well as accuracy.

▸ **www.mt.com/floor-scales**

	PFA569lift	**PFA579lift**	**2158 EZ-Clean**
	Stainless steel platform with lift device fit for wet, wash down, hygienic, and hazardous environments. Easy to load and clean.	Stainless steel platform with lift device fit for wet, wash down, hygienic, and hazardous environments. Easy to load and clean.	Pneumatically lifting provides full access to platform underside and pit are for complete wash down and sanitation.
Applications	• Sanitary, basic and precision weighing • Filling and formulation • Bulk material handling	• Sanitary, basic and precision weighing • Filling and formulation, • Bulk material handling	• Sanitary, basic and precision weighing • Filling and formulation • Bulk material handling
Accuracy	Advanced precision	Advanced precision	Advanced precision
Versatility	3 capacities, 2 sizes	3 capacities, 2 sizes	4 capacities, 6 sizes
Process Integration	Analog interface	Analog interface	Analog interface
Compliance Support	Hygienic design, Hazardous area approved, FM Div.1, Div. 2	Hygienic design, Hazardous area approved, FM Div.1, Div. 2	Hygienic design, Hazardous area approved, FM Div.1, Div. 2
Resolution	NTEP Class 3, 5,000d	NTEP Class 3, 5,000d	NTEP Class 3, 5,000d
Capacity Range (kg)	600 to 3,000	600 to 3,000	500 to 10K
Platform Size (in)	48 x 48 to 60 x 60	48 x 48 to 60 x 60	36 x 36 to 60 x 84
Ingress Protection	IP69K	IP69K	IP69K
Weighing Platform Material	304 stainless steel	304 stainless steel	304 or 316 stainless steel
Load Cell	Model 745A stainless steel hermetically sealed 2mV/V load cells	Model 745A stainless steel hermetically sealed 2mV/V load cells	Model 745A stainless steel hermetically sealed 2mV/V load cells
Approvals, Certificates	FM, CSA, Ex, ATEX	FM, CSA, Ex	FM, CSA, Ex, ATEX
Special Features	Rocker foot suspension, medium duty	Rocker pin suspension, high durability	Rocker pin suspension, high durability

Custom and Specialty
Scales for Specialty Applications

U-Shaped scales designed for pallet weighing along with ultra heavy capacity platforms designed to fit your specialty applications.

▶ **www.mt.com/PUA579**

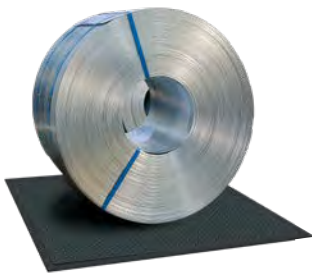|	**PTA464 U-Scale / PTA469 U-Scale**	**PTA664 U-Scale / PTA669 U-Scale**	**MG4500 Liftmate**
	Simply load the pallet jack into the open area and lower down. No ramps or pits to slow the process or cause safety hazards.	Simply load the pallet jack into the open area and lower down. No ramps or pits to slow the process or cause safety hazards.	Designed for heavy-duty use. 40,000 lb and 60,000 lb capacities.
Applications	• Material handling on pallet • Basic moveable weighing • Filling and formulation	• Material handling on pallet • Basic moveable weighing • Filling and formulation	• Heavy duty oil weighing
Accuracy	Standard precision	Advanced precision	Standard precision
Versatility	3 capacities, 3 sizes	3 capacities, 3 sizes	2 capacities, 6 sizes
Process Integration	Analog interface	Analog interface	Analog interface
Compliance Support	Hygienic design, Hazardous area approved, FM Div.1, Div. 2	Hygienic design, Hazardous area approved, FM Div.1, Div. 2	Hygienic design, Hazardous area approved, FM Div.1, Div.
Resolution	NTEP Class 3, 5,000d	NTEP Class 3, 5,000d	NTEP Class 3, 3,000d
Capacity Range (kg)	600 to 2,500	300 to 6,000	40K to 60K
Platform Size (in)	48 x 48 to 60 x 60	48 x 48 to 60 x 60	60 x 60 to 96 x 120
Ingress Protection	IP69K	IP69K	IP69K
Weighing Platform Material	Epoxy-painted carbon steel, 304 stainless steel	Epoxy-painted carbon steel, 316 stainless steel	Epoxy-painted carbon steel, 316 stainless steel
Load Cell	Model 745A stainless steel hermetically sealed 2mV/V load cells	Model 745A stainless steel hermetically sealed 2mV/V load cells	Model 743 stainless steel hermetically sealed 2mV/V load cells
Special Features	Rocker foot suspension, medium duty	Rocker foot suspension, medium duty	Rocker pin suspension, high durability

Scales for Special Applications

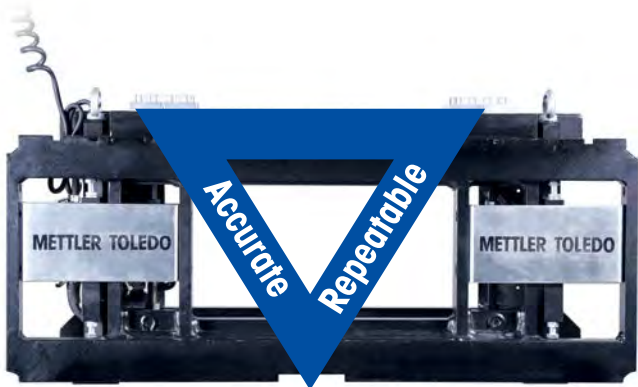## Our Solution
For Your Production

VFS120 Forklift Scale
Unbeatably Robust

Designed for tough industrial environments, METTLER TOLEDO forklift scales set the standard for reliability, safety and accuracy in heavy-use applications. Whether your business is freight logistics, shipping or warehousing, on-board weighing can significantly speed up your processes.

▶ **www.mt.com/VFS120**

3-point suspension stablizes loads for accurate weighing, even when they are uneven. This promotes repeatable measurement and reduced need for regular calibration.

Accuracy Over Time
Experience consistently high weighing accuracy without the expense and hassle of frequent adjustment. VFS120 holds calibration for 12 months.

Rugged and Reliable
The heavy-use scale carriage enables you to keep working when other scales break down. Minimal maintenance and a long lifespan ensure low cost of ownership.

Designed for Safety
The scale has a high-visibility window, making it easy for the forklift operator to see loads, position forks for lifting and avoid accidents.

Onboard Pallet Weighing
VFS120 Forklift Scale

The VFS120 forklift scale can be installed on any Class II forklift truck and is an ISO-approved accessory compatible with any other ISO-approved accessories.

Capacity	1,500 / 2,000 / 3,000 / 5,000 kg 3,000 / 5,000, 7,500, 10,000 Lbs
Resolution	1,000~1,500e
Stable Weighing Time	1–2 seconds
Angular Compensation Range	Pitch ±5°, Roll ±3°
Overload	Safe overload: 150% / limited overload: 300%
Capacity Loss	~15% of forklift capacity
IP Protection	IP65 for electric parts
More Information	www.mt.com/VFS120

BBA242 Scale Family
The Right Shade from the Start

Improve your paint-mixing efficiency and accuracy. BBA242paint and BBA242form bring a new level of comfort and functionality into the automotive body shop. An RS232 interface allows you to download up to 20 recipes from a PC. Graphics guide you through mixing. Automated correction modes can be accessed in case you overshoot. BBA242paint offers all the features you need for PC-based mixing control. BBA242form adds formula mode.

▶ **www.mt.com/BBA242**

The easy-to-use graphic display allows operators to mix a formula by following guided steps. The appropriate color code and required quantity will be displayed for a precise match. Each downloaded recipe is easy to access and process.

Full Graphic Display
The backlit graphic LCD display allows full text and multi-language communication, guiding you through paint mixing with ease.

True Industrial Design
BBA242 has been developed for the ruggedness of the automotive body-shop environment.

Extensive Connectivity
With RS232, USB and WLAN connection options, BBA242 scales integrate into almost any IT environment.

BBA242 Models Specifications

	BBA242paint or BBA242form
Resolution	7,100e / 71,000d
Capacity	7.1 kg
Readability	0.1 (0.05 g up to 999 g)
Display	Backlit graphic LCD, 192 x 64 pixel
Housing	Cast aluminum
Platform	Stainless steel
Protection	IP54
Interface	RS232, connectable to various color mixing systems
Hazardous Area Approval	BBA242x paint or BBA242x form: ATEX: II 2 G Ex ib IIB T4; IECEx: Ex ib IIB T4; FM: IS Class I Div 1, Groups C & D T4; CSA: IS Class I, Div 1 Group C & D T4; BBA242xx paint or BBA242xx form: ATEX: II 3 G Ex nL IIB T4; IECEx: Ex nL IIB T4
More information	www.mt.com/BBA242

ADI856 HD Touchscreen System
The Right Color at Your Fingertips

With a large HD color touchscreen display, ADI856 gives you the ability to mix paint using your PC more easily than ever before. You can control the entire process from the solvent-resistant touchscreen display. The touchscreen display comes standard in an easy-clean, stainless-steel housing. ADI856 works with all standard PCs and is compatible with all paint and office-software packages.

▶ **www.mt.com/ADI856**

In the refinishing industry, obtaining the perfect color match for the job is critical. Even the smallest drop can make a difference. The ADI856 HD touch-sensitive display mirrors the information from your remote PC, allowing you to control the formulation software from the mixing room. This provides quick and accurate results.

Large HD Touchscreen Display
The 15.6" HD color display is easy to read and can be adjusted to avoid glare. The bright color display allows you to easily select the right formula for your job.
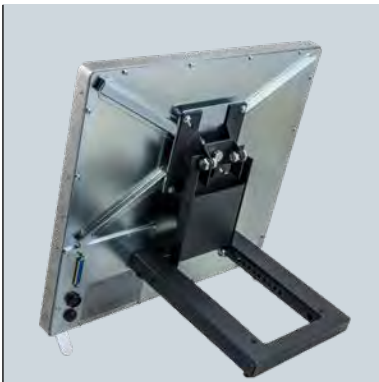
True Industrial Design
ADI856 is simple to install and works with all standard PCs. It has been developed for the ruggedness of the automotive body-shop environment.
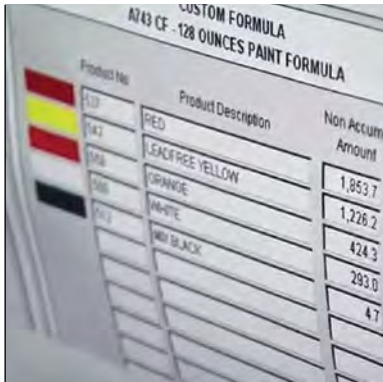
Direct Scale Integration
Our intrinsically safe BBA242 paint scales can be connected directly to the ADI856, providing complete control of the scale and paint-mixing software.

Safe to Use
ADI856 Touch Screen Terminal

The ADI856 is fully approved for use in hazardous areas classified Class I Division 1.

ADI856 Display Unit

Screen Size	15.6"
Resolution (pixels)	1,920 x 10,080 (Full HD), 1,366 x 765, 800 x 600
Approvals	FM Class I, Division 1, Group C, D The Mettler Toledo ADI856 Touch Display System has been tested and certified by FM Approvals LLC for IntecPC LTD, Poynton, SK12 1 PQ, UK
Atmospheric Humidity	Max 80%
Temperature Range	Operation: 32–110° F (0–40° C) Storage: 0–120° F (-20–50° C)
Connectivity	Local connection to Mettler Toledo scales BBA242 and Panda 7
Weight	20lbs (8.5 kg)

ADI856 Interface

Interface Cable	15 m
Temperature	Operation: 14–110° F (-10–40° C) Storage: 0–120° F (-20–50° C)
Atmospheric Humidity	Max 80%
Weight	4lbs (2 Kg)

Power Supply

Operating Voltage	90VAC–264VAC @50–60Hz
Power Consumption	25W typ
Power Cable	Grounding-type plug with neutral conductor

BC Scale Family
Perfect for Letters and Parcels

BC scales are designed to provide postal, carrier and express applications with faster processing, better accuracy and easier set-up. BC scales feature analog and digital load cells with advanced compensation and multi-interval capabilities. They are simple to set up and operate thanks to USB connectivity, an intuitive display menu and an easy-to-use boot-up wizard. The wizard facilitates initial installation by prompting for required parameters.

▶ **www.mt.com/ind-bc-scale**

The BC scale is a true global platform for postal and shipping applications. The large graphical display provides easy customization and flexibility for the scale to meet local requirements.

Courtesy of Precision Warehouse Design

Communications to Meet Connectivity Requirements
BC scale supports Carrier serial protocols, plug and play USB, OPOS drivers, Ethernet for cloud or server based applications and Bluetooth for wireless mobility communication.
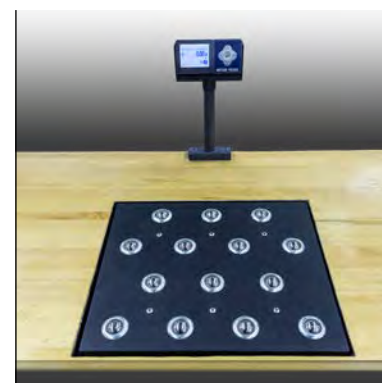
Flexible Configuration
Scales are adaptable with special capacity and increment sizes, multiple display options and special platter designs to allow faster parcel processing.

Processing Letters and Parcels in One Self-service Kiosk Scale
Kiosk scales are utilized with no display or a remote mounted display. All functions including calibration can be done through the scale communications.

Rugged and Reliable Design

BC scales offer high durability and long life due to all-metallic frames and heavy-duty overload protection. A single scale can weigh light envelopes with high precision, while robust overload protection allows the same scale to handle the shock of heavy parcels.

The solid frame of a METTLER TOLEDO BC scale

Bluetooth

Measurement Canada An Agency of Industry Canada

Mesures Canada Un organisme d'Industrie Canada

BC Scales Model Overview
Optimized for Accuracy and Simplicity

METTLER TOLEDO offers a broad range of scales for postal, carrier and express environments for faster processing, better accuracy, and easier set-up.

▶ **www.mt.com/ind-bc-scale**

Robust and Flexible for Shipping and Mail Operations

A balance of performance and value through accuracy, durability, ease of use, and versatile communications.

▶ **www.mt.com/ind-bc-scale-brochure**

	BC-15U	BC-3LU	BC-6LU	BC-30U	BC-60U	BC-150U
Applications	• Basic weighing • Tare • Bulk mail counting	• Differential weighing of letters from a bin • Display weight and price		• Counting of small parts for packing stations • Product verification for packing stations • Label offset to compensate for packing lists / Label applied after final weighing		
Key Feature	Provides high resolution required for shipping via Global Posts & USPS			Superb reliability for retail stores, mail rooms, warehouse packing stations and shipping departments		
Attributes	Simple set-up and operation, high accuracy, functional durability, flexible communication, flexible configuration			Simple set-up and operation, high accuracy, functional durability, flexible communication, flexible configuration		
Capacity	30 lb / 15 kg	70 lb / 35 kg	150 lb / 60 kg	70 lb / 30 kg	150 lb / 60 kg	150/300 lb / 60/150 kg
Readability	0–7 lb x 0.1 oz 7–15 lb x 0.2 oz	0–7 lb x 0.1 oz 7–70 lb x 0.2 oz	0–10 lb x 0.1 oz 0–70 lb x 0.2 oz 0–149 lb x 0.5 oz	0.05 lb 0.01 kg	0.05 lb 0.02 kg	0–150 x 0.05 lb 0–300 x 0.1lb
	0–3 kg x 0.001 kg 3–15 kg x 0.005 kg	0–3 kg x 0.001 kg 3–6 kg x 0.002 kg 6–35 kg x 0.01 kg	0–15 kg x 0.005 kg 0–30 kg x 0.01 kg 0–60 kg x 0.02 kg			0–60 x 0.02 kg 0–150 x 0.5 kg
Frame	Steel plate	Die cast aluminum	Die cast aluminum	Die cast aluminum	Die cast aluminum	Tubular steel frame
Platter Construction	ABS plastic (dished), stainless steel	ABS plastic (dished), stainless steel	ABS plastic (dished), stainless steel, ball top	ABS plastic (dished), stainless steel	ABS plastic (dished), stainless steel, ball top, roller top	Stainless steel, ball top, roller top
Dimensions (flat top)	10.9 x 11.6 in 270 x 290 mm	11.8 x 13.8 in 300 x 350 mm	11.8 x 13.8 in 300 x 350 mm	12.3 x 13.9 in 300 x 350 mm	12.3 x 13.9 in 300 x 350 mm	16.5 x 20.5 in 400 x 500 mm 650 x 550 mm (Special) 800 x 600 mm (Special)
Approvals	EC / OIML, NTEP / MC	EC / OIML, NTEP / MC	EC / OIML, NTEP / MC	EC / OIML, NTEP / MC	EC / OIML, NTEP / MC	EC / OIML, NTEP / MC
Alibi Memory	Alibi	Alibi	Alibi	Alibi	Alibi	Alibi
Standard PC Communication	USB, RS232, virtual serial, keyboard wedge			USB, RS232, virtual serial, keyboard wedge		
Optional Communication	Bluetooth, Ethernet (as special)	Bluetooth, Ethernet	Bluetooth, Ethernet	Bluetooth, Ethernet	Bluetooth, Ethernet	Bluetooth, Ethernet
More Information	**www.mt.com/ind-bc-scale**			**www.mt.com/ind-bc-scale**		

BC-60U: Rotate parcels easily with BC ball top platter to allow faster scanning of barcodes.

BC-150U: BC roller top scale with conveyor Drop-in kit for easy mounting in a roller conveyor.
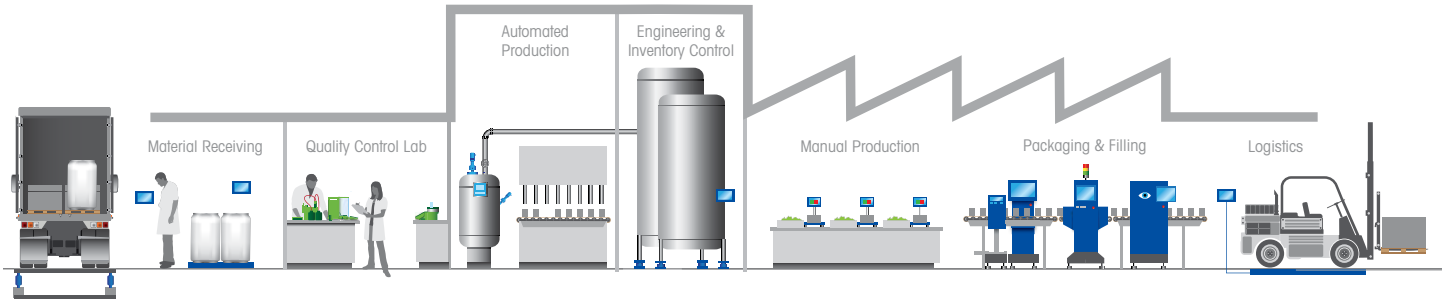
Pre-fabricated stainless steel mounting kit provides for easy installation in counter tops with minimal engineering. The remote tower display has enhanced visibility with large font – 20 mm.

Accessories

Our Solution
For Your Production

Automated Production

Engineering & Inventory Control

Material Receiving Quality Control Lab Manual Production Packaging & Filling Logistics

APR Printers
For Industrial Weighing Applications

APR printers are ideal for when clear and accurate label printing is required in industrial environments. With the lowest total cost of ownership in their class, a compact footprint and multiple connectivity options, these models pack the power of an industrial printer into an easy-to-service, modular design.

▶ **www.mt.com/industrial-printers**

Print Your Weighing Results

Fixed and portable label printers for industrial applications

▶ **www.mt.com/industrial-printers**

APR310
Fast, Compact, Flexible

- **Blazing Fast Ticket Printing**
  Fast ticket and/or slip printer for printing muti-part documents up to 42 columns in width.
- **Easy to Use**
  Simple to operate control panel makes the printer ideal for applications in scale houses, offices or at shipping and receiving docks.

APR510
Compact, durable label printer

- **Economical Operation**
  Stationary print head and economical high-capacity ribbons keep cost of ownership low. Labels print individually, reducing waste.
- **Easy to Use**
  Simple operator interface and quick-loading media make for trouble-free use. Wired and wireless connection options support easy setup and integration.

APR710
Rugged, high-speed industrial printer

- **Simple Interface**
  Easy to navigate, menu-driven LCD displays indicate printer status and facilitate operator input. Side window provides instant visual assessment of label stock.
- **Easy Set-Up**
  Straightforward media loading and routing. A variety of options available including a peel-and-present mechanism, cutter and tray ensemble, and an internal re-wind kit.

	APR310	APR510	APR710
Type	Dot Matrix	Direct Thermal or Thermal Transfer	Direct Thermal
Operating Voltage	100-240 VAC	100-240 VAC	100-240 VAC
Print Speed	195 mm/sec	127 mm/sec	254 mm/sec
Resolution	7x9 (2-dot), 5x9 (3-dot)	203 dpi, 300 dpi	203 dpi, 300 dpi
Media Types	Ribbon cassette, Nylon #40 denier	Roll-fed or fan-fold, die-cut, reflective, notch or continuous stock	Roll-fed or fan-fold materials, die-cut or continuous labels; perforated or continuous stock
Media Sizes	Width: 80-182 mm Thickness: 0.12-0.25 mm	Width: 19–112 mm Thickness: 0.06–0.25 mm	Width: 19–118 mm Thickness: 0.0635–0.254 mm
Communication	RS232	Wired and wireless Ethernet, USB, RS232	USB, RS232, Centronics® IEEE 1284 parallel port
Construction	Plastic	Plastic	Metal
More Information	www.mt.com/Ind-APR310	www.mt.com/ind-APR510	www.mt.com/ind-APR710

Ticket, Strip, and Form Printers
Completing the Solution

Our ticket, strip, and form printers provide a versatile set of solutions to round out any portfolio of printing needs. These dependable and durable printers provide a variety of documentation formats where traceability is desired.

▶ **www.mt.com/industrial-printers**

Print Your Weighing Results

Fixed and portable label printers for industrial applications

▶ **www.mt.com/industrial-printers**

	8808 Ticket Printer	**8857 Strip Printer**	**Okidata Microline 320 Form Printer**
	Heavy-Duty Ticket and Label Printer	Compact, Fast, and Reliable	Reliable, low-cost impact printing
	• **Simple Setup** Bi-directional parallel, RS232/485, and USB interfaces assure easy integration. • **Easy to Use** Straightfoward operator interface and quick-loading media make for trouble-free use.	• **Print Security** Impact printing results will not fade over time so your important records are safe for later reference. • **Simple to Use** Drop-in auto-paper loading and few moving parts make the 8857 durable and easy to operate.	• **Rugged and Reliable** Runs twice as long as other printer's in its class. • **Accommodates Your Growing Business** Compatible with virtually all customer and off-the-shelf software.
Type	Dot Matrix Impact	Dot Matrix Impact	Dot Matrix Impact
Operating Voltage	100-240 VAC	100-240 VAC	100-127 VAC
Print Speed	233 (3-dot), 311 (2-dot) characters/sec	220 mm/sec	73-435 characters/sec
Resolution	9x9 (3-dot), 7x9 (2-dot)	9 x 9	240(H) X 216(V) dpi
Media Types	Snap-in endless loop cartridge	Snap-in endless loop cartridge	Ribbon cartridge
Media Sizes	Width: 70-210 mm Thickness: 0.09-0.36 mm	Width: 76 mm Thickness: 0.07 mm	Width: 76-254 mm Thickness: 0.06-0.36 mm
Communication	RS232	RS232	Bi-directional Parallel, USB, RS232
Construction	Plastic	Plastic	Plastic
More Information	**www.mt.com/8808**	**www.mt.com/8857**	**www.mt.com**

Remote Weight Display
ADI Scoreboards

Remote displays offer flexibility to large-scale weighing applications and operations where available space is at a premium. ADI Scoreboards come in multiple variations to fit your needs.
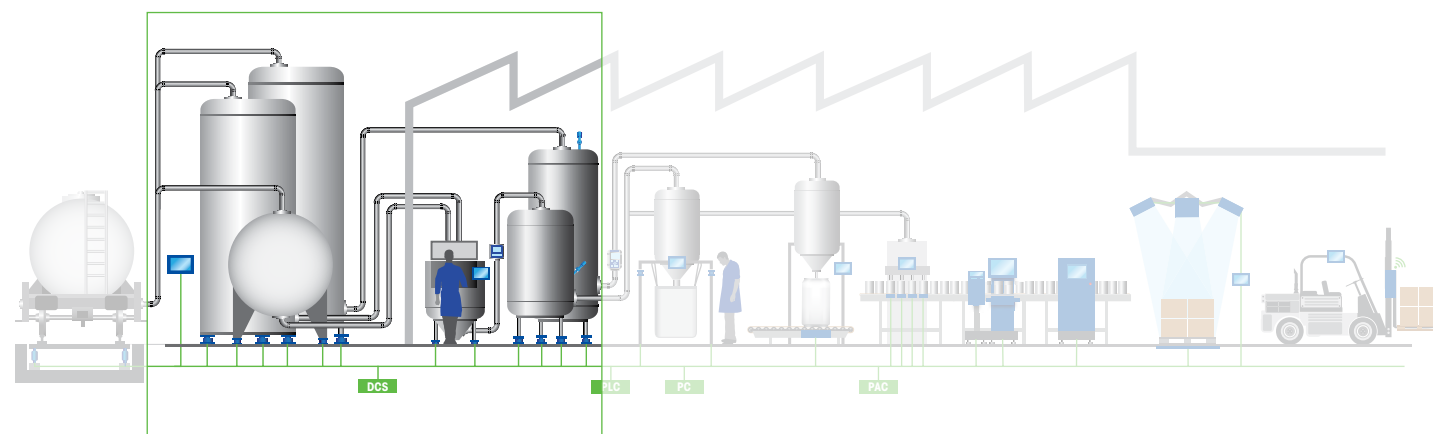
▶ **www.mt.com/ADI_remote_display_family**

	ADI150	ADI155	ADI550	ADI210
Characters	6 digits, red LED, 4.7 in high	6 digits, red LED, 4.7 in high	6 digits, red LED, red/green traffic light, 4.7 in high	6 digits, red LED, 2 in high
Communication	RS232/485/20mA CL	Wireless Communication with supplied RF100 transmitter	RS232/485/20mA CL	RS232/485/20mA CL
Ingress Protection	IP56	IP56	IP56	IP65
Material	Powder-coated aluminum alloy	Powder-coated aluminum alloy	Powder-coated aluminum alloy	Powder-coated aluminum alloy
Operating Environment	-4~120 °F, 10-95% relative humidity, non-condensing	-4~120 °F, 10-95% relative humidity, non-condensing	-4~120 °F, 10-95% relative humidity, non-condensing	-4~120 °F, 10-95% relative humidity, non-condensing
Operating Voltage	100-240 VAC	100-240 VAC	100-240 VAC	110-220 VAC
Dimensions (H x L x D in)	7.4 x 34 x 2.3 in	7.4 x 34 x 2.3 in	7.4 x 34 x 2.3 in	4.75 x 12 x 8.375 in
Weight (lb)	25 lbs	25 lbs	10.2 kg	3.6 kg
More Information	www.mt.com/VEH_ADI_ScoreBoard	www.mt.com/VEH_ADI_ScoreBoard	www.mt.com/VEH_ADI_ScoreBoard	www.mt.com/VEH_ADI_ScoreBoard

Weigh Modules

Load Cells

Our Solution
For Your Production

Multi-Purpose Weigh Modules
Right the First Time

Tank weighing made easy. SWB505 MulitMount and SWC515 PinMount weigh modules are designed to fulfill broad application requirements for process tanks, storage silos and conveyor weighing. Suitable for high-precision requirements, they are available in resolutions up to OIML C6/NTEP 10,000 d. Three material selections allow use in various environments.

▶ **www.mt.com/compression-wm**

360-degree checking is a key for superior safety. Independent of weigh module orientation, maximum safety ratings are achieved.

Superior Safety
High mechanical safety, 360° checking, drop down protection and lift-off protection keep the tank in place.
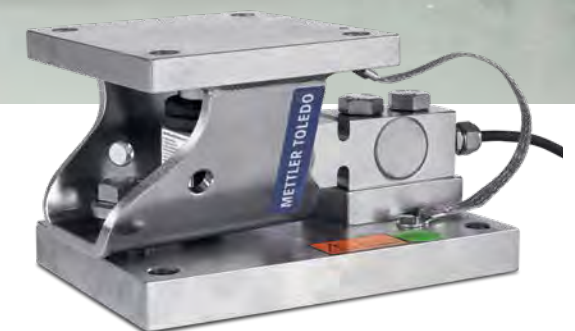
Easy Integration
Safelock avoids load-cell overload during shipping and installation.

Helpful Accessories
Agitators, hot tanks, vibration and shock loading, the right accessories are available for even extreme cases.

Fully Specified Safety Ratings

Silo and tank scales are critical in terms of safety. Tipping can lead to human injury, product loss and financial damage. To support mechanical safety calculations, METTLER TOLEDO weigh modules are fully specified to normal, yield and ultimate limits. All values are verified by real physical testing (picture). Yield limits are typically used for dimensioning against infrequent events such as heavy-wind loads, while ultimate limits are used for one-off events such as severe earthquakes.

Multi-Purpose Weigh Modules
Right the First Time

SWB505 MultiMount and SWC515 PinMount provide broad application capabilities for silo, tank, hopper and conveyor scales. With the right accessories, they cope with agitators, hot contents, vibrations and shock loading.

▶ **www.mt.com/compression-wm**

Watch the Video

Learn the key values of multi-purpose weigh modules:
- Easy installation
- Safety features
- Stabilization
- Upgrade to PowerCell

▶ **www.mt.com/ind-wm-values-video**

	SWB505 5 kg – 300 kg	SWB505 110 kg – 4,400 kg	SWC515 7.5 t – 22.5 t	SWC515 30 t – 100 t
	• **Reliable** IP68/IP69K load cell for best possible reliability • **Easy operation** Safelock supports the installation process and makes it impossible to overload the load cell	• **High accuracy available** OIML C6, NTEP III M10 version for high accuracy • **Easy operation** Safelock supports the installation process and makes it impossible to overload the load cell	• **Low profile** PinMount provides low profile to easy integration and retrofit • **Easy operation** Safelock supports the installation process and makes it impossible to overload the load cell	• **Compact and strong** Although very compact the load ratings are extremely high for superior safety • **Easy to integrate** Safelock supports the installation process and makes it impossible to overload the load cell
Applications	Low capacity process weighing, pharma CIPs	Regular to high performance process tank weighing	Large process tanks, silos	Storage silos
Accuracy	OIML C3, C6, NTEP 5,000	OIML C3, C6; NTEP 5,000, 10,000	OIML C3, NTEP 5,000	OIML C3, NTEP 5,000
Hazardous	ATEX, FM, IECEx, Nepsi	ATEX, FM, IECEx, Nepsi	ATEX, FM, IECEx, Nepsi	ATEX, FM, IECEx, Nepsi
Material	Zinc plated, 304 stainless, 316 stainless	Zinc plated, 304 stainless, 316 stainless	Zinc plated, 304 stainless, 316 stainless	Zinc plated, 304 stainless
360° Checking	Yes	Yes	Yes	Yes
Safe Lock	Yes	Yes	Yes	Yes
Accessories	Agitators, hot tanks, vibration/shock, dummy applications	Agitators, hot tanks, vibration/shock, dummy applications	Agitators, hot tanks, vibration/shock, dummy applications	Agitators, hot tanks, vibration/shock, dummy applications
Protection	IP68/IP69K	IP68/IP69K	IP68/IP69K	IP68/IP69K
More Information	www.mt.com/ind-multimount	www.mt.com/ind-multimount	www.mt.com/ind-pinmount	www.mt.com/ind-pinmount

PowerMount Weigh Modules
Know What's Ahead

PowerMount Weigh Modules use PowerCell technology for its superior performance and diagnostic features. Each PowerCell is monitored on its performance and an alarm is created if problems occur. This makes manufacturing more reliable by making sure failures do not go unrecognized and cause inaccurate weigh results.

▶ **www.mt.com/ind-powermount**

RunFlat
In the rare case of load cell failure, RunFlat allows simulation of the faulty load cell. Operation can continue until the problem is solved. This reduces downtime as much as possible.
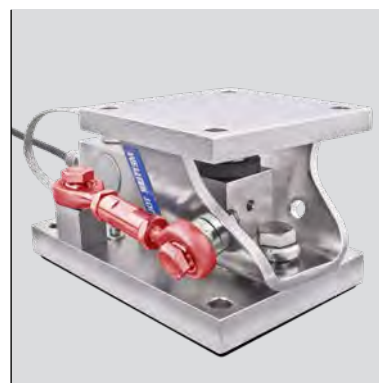
Superior Safety
High mechanical safety, 360° checking, drop down protection and lift-off protection keep the tank in place.

No Junction Box
PowerMount uses a daisy-chain network and thus does not need junction boxes, which is a great improvement in terms of reliability.

Helpful Accessories
Agitators, hot tanks, vibration and shock loading, the right accessories are available for even extreme cases.

OIML C10 Accuracy

When accuracy really matters, PowerMount Weigh Modules are available in C10 accuracies three times better than usual. This is possible because PowerCell is more than a digital load cell. PowerCell load cell errors are actively compensated by an inbuilt µ-processor. Other errors – unavoidable in analog systems due to cables and junction boxes – are fully eliminated. Electromagnetic impacts are also under control with PowerMount.

PowerMount Weigh Modules
Know What's Ahead

SWB605 and SWC615 PowerMount weigh modules allow you to control processes and predict potential trouble before serious costs occur. They are available in superior accuracy up to OIML C10, NTEP 10,000 d. CalFree™Plus provides the most accurate calibration method without the use of test weights.

▶ **www.mt.com/ind-powermount**

Watch the Video

Learn the key values of PowerMount Weigh Modules:
- Predictive maintenance
- Superior accuracy
- Easy integration

▶ **www.mt.com/ind-powermount-video-fb**

	SWB605 220 kg – 4,400 kg	SWC615 7.5 t – 22.5 t	SWC615 20 t – 90 t
	• **Predictive maintenance** Monitors load cell conditions; alarms in case of failure • **Superior accuracy** Due to in-built digital error compensation PowerMount achieves exceptional accuracy	• **Predictive maintenance** Monitors load cell conditions; alarms in case of failure • **Superior accuracy** Due to in-built digital error compensation, PowerMount achieves exceptional accuracy	• **Extended predictive maintenance** Monitors load cell voltage, temperature, breach and alarms in case of failure • **Superior accuracy** Due to in-built digital error compensation PowerMount achieves exceptional accuracy
Applications	High-performance process weighing	High-performance process weighing	High-performance silo weighing
Accuracy	OIML C3, C6, C10; NTEP 5,000, 10,000	OIML C3; NTEP 5,000	OIML C3; NTEP 5,000
Hazardous	ATEX, FM, IECEx, Nepsi	ATEX, FM, IECEx, Nepsi	ATEX, FM, IECEx, Nepsi
Material	Zinc plated, 304 stainless, 316 stainless	Zinc plated, 304 stainless, 316 stainless	Zinc plated, 304 stainless
360° Checking	Yes	Yes	Yes
Safe Lock	Yes	Yes	Yes
CalFree-Plus, Push-Button Calibration	Yes	Yes	Yes
Accessories	Agitators, hot tanks, vibration/shock, dummy applications	Agitators, hot tanks, vibration/shock, dummy applications	Agitators, hot tanks, vibration/shock, dummy applications
Protection	IP68/IP69K	IP68/IP69K	IP68/IP69K
More Information	www.mt.com/ind-powermount	www.mt.com/ind-powermount	www.mt.com/ind-powermount

Specific-Purpose Weigh Modules
Cope with Extremes

When standard weigh modules are not suitable, these special products provide solutions. Low-profile, ultra-high capacity, redundant weighing or suspended hoppers – they cover them all. METTLER TOLEDO sales experts can help you find the best solution to your individual situation. Professional installation and calibration is provided by our service team.

▸ **www.mt.com/weigh-modules**

Redundant Weigh Module
For very critical applications where wrong weighing results can cause significant follow-up costs, redundancy should be considered. Two completely independent load cells in one weigh module allow online comparing of results and action in case of failure.

Low Profile
These modules' 60–100 mm (2.3–4 inch) height can be integrated even when space is tight.

Tension Weigh Module
These modules convert suspended hoppers into reliable weighing devices, with all necessary features for easy implementation and accuracy.
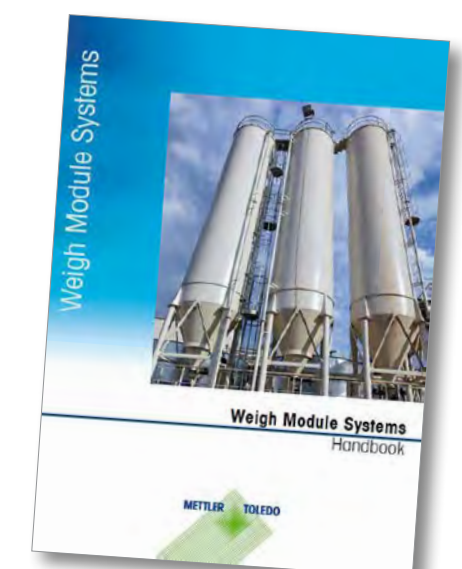
Heavy Capacity
For storage silos beyond 200 t, METTLER TOLEDO supports design and integration.

Weigh Module Systems Handbook

Selecting the right weigh module requires know-how and experience. The METTLER TOLEDO Weigh Module Systems Handbook for engineers deals with all aspects of designing safe and accurate tanks scales. Get a free copy:

▸ **www.mt.com/ind-system-handbook**

Specific-Purpose Weigh Modules
Cope with Extremes

Ultraflat RingMount, redundant RingMount, heavy capacity Gagemount and SWS310 TensionMount cope with more extreme weigh module requirements. Despite their highly specialized natures, they are easy to integrate.

▶ **www.mt.com/compression-wm**

Webinar

How to build a tank scale:
- Technology overview
- Correct selection of weigh module
- Designing tanks/silo scales
- Calibration

▶ **www.mt.com/webinar-ind-tankweighing**

|	0970 RingMount 250 kg – 10 t	0970 Redundant RingMount 250 kg – 10 t	3390 GageMount 200 t – 300 t	SWS310 TensionMount 50 kg – 10 t	SWB805 MultiMount 110 kg – 4,400 kg
	• **Reliable** 58,4 / 99.5 mm height for easy integration, IP68/IP69K load cell for best possible reliability • **Hygienic features** Polished surfaces and no open threads make cleaning easy	• **Redundant** Two independent load cells allow online double-checking of weighing results • **Compact** Despite two load cells, the weigh module is very compact	• **High-capacity** For heavy capacity silos • **Accuracy** Column-type load cells for best accuracy and compact dimensions	• **Suspended hoppers** This weigh module makes weighing suspended containers as simple as possible • **All on board** All features to get the best accuracy and reliability from S-type load cells	• **Contamination Free** Fully approved hygienic weigh module designed to avoid contamination in the harshest environments • **Self-Draining** Strategic contours and slopes along with a mirror-polished surface and no metal-to-metal contact effectively allow water to runoff and keep bacteria out
Applications	Process tanks, pharma CIPs	High risk weighing	Large storage silos	Batching hoppers	Food and pharmaceutical
Accuracy	OIML C3, C6; NTEP 5,000, 10,000	OIML C3, C6; NTEP 5,000, 10,000	OIML C3, NTEP 5,000	OIML C3, NTEP 5,000	OIML C3, NTEP 5,000
Hazardous	ATEX, FM, Nepsi	ATEX, FM, Nepsi	ATEX, FM, Nepsi, IECEx	ATEX, FM, Nepsi	ATEX, FM
Material	316 stainless steel	316 stainless steel	Carbon steel, 304 stainless steel	Zinc plated steel	304 stainless or 316 stainless
360° Checking	Yes	Yes	No	n/a	Yes
Safe Lock	Yes	Yes	No	n/a	No
Accessories	Hot tanks, vibration/shock	Hot tanks, vibration/shock	n/a	n/a	Stabilizer
Protection	IP68/IP69K	IP68/IP69K	IP68/IP69K	IP67	IP68/69K
More Information	www.mt.com/ind-ringmount	www.mt.com/compression-wm	www.mt.com/compression-wm	www.mt.com/tension-wm	www.mt.com/weigh-modules

Value Line Weigh Modules
Economical Solutions

For general-purpose weighing when the next dollar counts, our value line weigh modules provide excellent solutions for the cost. Our dual-ended beam and cantilever-bending-beam weigh modules are built to last and perform in tough environments.

▸ **www.mt.com/weigh-modules**

Value Line Weigh Modules
Value Line weigh modules offer good value for general-purpose weighing of tanks, hoppers, conveyors, and OEM machinery. They use cantilever-bending-beam or dual-ended-beam load cells to deliver accurate and repeatable weighing. We offer economic weigh modules suitable for static loading in applications where thermal expansion/contraction occurs as well as applications that have minimal lateral movement. Mounting hardware is available in zinc-plated carbon steel, painted carbon steel, and stainless steel to stand up to a variety of environments.
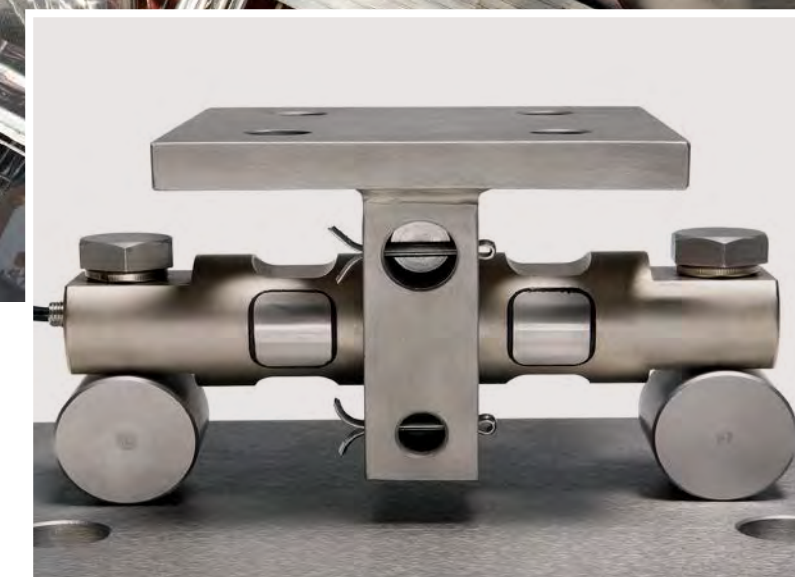
Load Cells
The cantilever-bending-beam load cells in the SWB220 are hermetically sealed for IP68 to IP68/IP69K protection. The dual-ended-beam load cells in the SWD440 and VLM3 are designed with potted seals for IP67 protection.

Suspension
SWB220 has a rigid suspension designed for minimal lateral movement. SWD440 and VLM3 have a bearing-pin suspension designed to allow the top plate to slide laterally to compensate for thermal induced movement
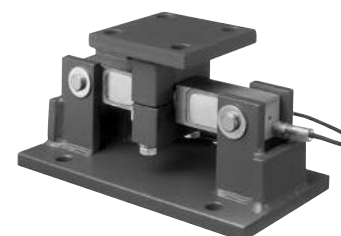
Multipurpose
Suitable for general-purpose weighing of tanks, hoppers, conveyors, and OEM machinery.

Ondemand Webinars

The planning and installation of tank, silo and vessel weighing systems are critical phases in achieving required accuracy and safety. Watch our ondemand webinars on how to do this and more:

▸ **www.mt.com/on-demand-webinars**

Value Line Weigh Modules
Economical Solutions

SWD220, SWB440, and VLM3 weigh modules fit a wide range of static weighing applications through proven general purpose designs. For the cost-conscious user, these weigh modules provide solutions to many needs at a lower price.

▶ **www.mt.com/compression-wm**

Tank Scale Service Checklist

Learn how to specify services for optimized tank weighing processes:
- Tank service specification
- Calibration and certification
- Maintenance, training, and support

▶ **www.mt.com/optimize-tank-weighing-processes**

	SWB220 110 kg – 1,100 kg	SWD440 5K kg – 250 t	VLM3 450 kg – 34 t
	• **Protective** Rigid Suspension features provide anti-uplift and overload damage protection reliability • **Versatile** Hermetically sealed load cells and compression mounts enable use in many static loading applications and environments	• **Compensatory** Bearing-pin suspension allows lateral movement to compensate for thermal expansion and contraction • **Self-Checking** Mounting hardware offers a self-checking design with anti-uplift protection	• **Compensatory** Bearing-pin suspension allows lateral movement to compensate for thermal expansion and contraction • **Self-Checking** Mounting hardware offers a self-checking design with anti-uplift protection
Applications	Weighing OEM Machinery, Conveyors, Tanks, Hoppers	Weighing Heavy-Capacity Tanks and Hoppers	Weighing Heavy-Capacity Tanks and Hoppers
Accuracy	OIML C3, NTEP 5,000	NTEP 5,000, 10,000	5,000 Non-approved
Hazardous	ATEX, FM	FM	FM
Material	Zinc Plated, 304 stainless	Nickel Plated, 304 stainless	Nickel Plated, 304 stainless
Protection	IP68/69K	IP67	IP67
More Information	**www.mt.com/weigh-modules**	**www.mt.com/weigh-modules**	**www.mt.com/weigh-modules**

Weigh Module Accessories
Match the Application

We have the right accessories to match weigh modules to tanks that require mixers, high temperatures or strong vibration/shock loading. Dead stands allow use of passive legs for economic level-control solutions. Precision junction boxes connect analog load cells as accurately as possible.

▸ **www.mt.com/weigh_modules**

White Paper

Load Cell & Weigh Module accessories:
- Function
- Application
- Accuracy

▸ **www.mt.com/ind-downloads-loadcell**

	Stabilizers	Thermal Pads Vibration/Shock Pads	Dead Stands Spacer Plates	Precision Junction Boxes
	• **Mixers, conveyors** Stabilizers calm tanks and create stable weighing results • **Retrofit** Stabilizers can be applied anytime later if required	• **Hot tanks** Insulate load cells from conductive heat to improve load cell accuracy and lifetime • **Vibration** Insulate the load cells from mechanical peaks to improve load cell lifetime	• **Level control systems** For passive legs - typically used when liquids level-control with reduced accuracy is required • **Easy load cell replacement** Spacer plates allow load cell replacement without lifting the tank	• **Precise connection** Connect analog load cells the most accurate way possible • **No trim-pots** Boxes provide corner adjustment with discrete resistors which avoids unstable trim-pots
Applications	Mixers, agitators, conveyors	Extreme mechanical and temperature conditions	Large storage silos	Multiple load-cell systems
Material	Carbon steel, 304 stainless steel, 316 stainless steel	Acetal up to 82°C PEI up to 170°C Fabric plastic shock pads	Carbon steel, 304 stainless steel	304 stainless steel, 316 stainless steel
Suitable for	SWB505, SWB605, SWC515, SWC615	SWB505, SWB605, SWC515, SWC615, 0970 RingMount, Redundant RingMount	SWB505, SWB605, SWC515, SWC615	All analog weigh modules
Retrofit	Yes	No	No	n/a
Dimension	No extra space required	Add. 25.4 mm height	See datasheet	Small, mid, large
More Information	**www.mt.com/compression-wm**	**www.mt.com/compression-wm**	**www.mt.com/compression-wm**	**www.mt.com/junctionbox**

Load Cells
When Accuracy Matters

METTLER TOLEDO load cells are made with the most modern equipment according to global quality standards. Our internal teams work closely together to help ensure that you are always able to access the highest quality load cell technology available.

▸ **www.mt.com/loadcell**

Fully approved
METTLER TOLEDO load cells are fully approved to global standards. Hazardous approvals come standard with load cells, so there is no need to order options, greatly simplifying logistics.

Superior Accuracy
Accuracy up to OIML C6, NTEP 10,000d allows you to build the most accurate scale for your needs and keep processes under control.

Stainless Steel
Many load cells are made from stainless steel and laser welded for highest reliability even in harsh environments.

Accessories
The right load-cell accessory is crucial for achieving the highest possible load-cell accuracy and lifetime.

ISO 9001 Development/Manufacturing

METTLER TOLEDO's load cell manufacturing facility has been certified. Load-cell development follows strict standards. All load cells must pass an 11-step testing procedure that includes reviews for metrology, IP-rating and shock absorption. During manufacture, full data collection allows optimization for product reliability and accuracy.

▸ **www.mt.com/ind-system-handbook**

Single-Beam Load Cells
Convert Structures to Scales

Beam load cells are used in multiples in floor scales, belt weighers, weighing systems, pallet scales, conveyor scales, and more. Most METTLER TOLEDO beam load cells are fully approved to OIML, NTEP, FM and ATEX as a standard so they can be used in legal weighing systems globally.

▸ **www.mt.com/singlebeam-lc**
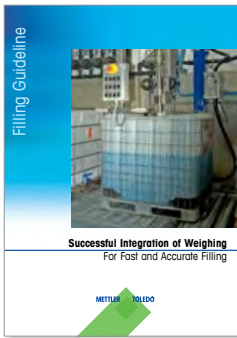
Filling, Dosing and Dispensing

See publications on how to build accurate scales:
- Application notes
- White papers
- Guides
- Brochures

▸ **www.mt.com/filling**

	MTB 5 kg – 300 kg	0745A 110 kg – 4,400 kg	SLB515 110 kg – 4,400 kg	SLB415 110 kg – 4,400 kg	SLB215 220 kg – 4,400 kg
	• **High accuracy available** OIML C6, NTEP III M10 version for high accuracy • **Fully approved** No need to order options, all approvals in the standard product	• **High accuracy available** OIML C6, NTEP III M10 version for high accuracy • **Fully approved** No need to order options, all approvals in the standard product	• **Threaded load introduction** Easy to integrate due to threaded load hole • **Fully approved** No need to order options, all approvals in the standard product	• **Blind hole load introduction** For allowing thermal expansion in conjunction with best accuracy • **Economic welded design** Nickel-plated steel and hermetically sealing combines best reliability and economics	• **Threaded load introduction** Easy to integrate due to threaded load hole • **Economic welded design** Nickel-plated steel and hermetically sealing combines best reliability and economics
Applications	Low capacity process weighing, pharma CIPs	Regular for high-performance process weighing in food and pharma	Process weighing tanks in food and pharma	Weighing in transport, logistics	Weighing in transport, logistics
Accuracy	OIML C3, C6; NTEP 5,000, 10,000	OIML C3, C6; NTEP 5,000, 10,000	OIML C3, NTEP 5,000	OIML C3, NTEP 5,000	OIML C3, NTEP 5,000
Hazardous	ATEX, FM, IECEx, Nepsi	ATEX, FM, IECEx, Nepsi	ATEX, FM, IECEx, Nepsi	ATEX, FM, IECEx, Nepsi	ATEX, FM, IECEx, Nepsi
Material	Stainless steel	Stainless steel	Stainless steel	Nickel-plated tool steel	Nickel-plated tool steel
Protection	IP68/IP69K	IP68/IP69K	IP68/IP69K	IP67	IP67
Accessories	Load introduction, load foot, base plates	Load introduction, load foot, base plates	Load introduction, load foot, base plates	Load introduction, load foot, base plates	Load introduction, load foot, base plates
More Information	www.mt.com/singlebeam-lc	www.mt.com/singlebeam-lc	www.mt.com/singlebeam-lc	www.mt.com/singlebeam-lc	www.mt.com/singlebeam-lc

Load Cell Accessories
Easy Integration

Load cell accessories support easy and correct load cell integration. They provide thermal expansion and cope with uneven supports. Some also provide a damping function to reduce peak loading.

▸ **www.mt.com/loadcell**

White Paper

Load Cell & Weigh Module accessories:
- Function
- Application
- Accuracy

▸ **www.mt.com/ind-downloads-loadcell**

	Expansion Kit	Expansion & Vibration Kit	Foot Kit	Base Plate Kit	Precision Junction Boxes
	• **Easy integration** Kit allows for correct load introduction to maintain high accuracy • **Accurate load introduction** Rocker pin load introduction for best accuracy	• **Rigid load introduction** Rubber cushion for coping with expansion and vibration • **Damping** Rubber layer provides damping function for reducing peak loads	• **Floor scales** Joint and rubber foot to cope with uneven floors and expansion • **Removable rubber** For clean areas, the rubber foot can be removed	• **Concrete floor** Install load cells on concrete floor • **Complete kit** Delivered with load cell mounting bolts and spacer	• **Precise connection** Connect analog load cells the most accurate way possible • **No trim-pots** Boxes provide corner adjustment with discrete resistors which avoids unstable trim-pots
Applications	Accurate weighing	Industrial tank weighing, filling, batching, conveyors	Floor scales	Tank weighing, conveyors	Multiple load cell systems Hazardous versions available
Material	Stainless steel	Stainless steel, NRB rubber	Stainless steel, NRB rubber	Zinc plated steel, 304 stainless steel	304 stainless steel, 316 stainless steel
Suitable for	MTB, 0745A, SLB515, SLB215, SLB415	MTB, 0745A, SLB515, SLB215, SLB415	MTB, 0745A, SLB515, SLB215, SLB415	MTB, 0745A, SLB515, SLB215, SLB415	All analog weigh modules
More Information	**www.mt.com/loadcell**	**www.mt.com/loadcell**	**www.mt.com/loadcell**	**www.mt.com/loadcell**	**www.mt.com/junctionbox**

Canister/Ring Load Cells
Robustness for Harsh Environments

Ring load cells and canister load cells are used in tank scales, vessel weighing, silo scales, truck weighing, vehicle scales and rail scales. We offer digital and analog load cells with OIML and NTEP approvals which are also suitable for hazardous-area use.

▶ **www.mt.com/loadcell**
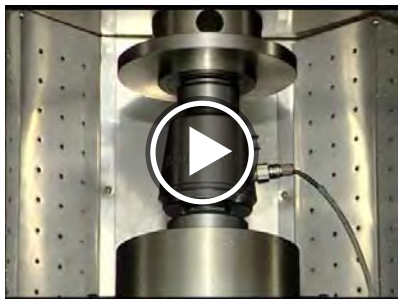
Watch the video

PowerCell PDX – how it's made:
- CNC manufacturing
- Laser welding
- Testing

▶ **www.mt.com/ind-powercell-how-it-is-made-video**

	SLC820 POWERCELL PDX **20 t – 90 t**	**0782** **20 t – 300 t**	**SLC611** **7.5 t – 22.5 t**	**RLC** **250 kg – 10 t**
	• **Reliable** High IP protection and in-built lightning protection • **Predictive diagnostics** Onboard monitoring of voltage, temperature and breach	• **Reliable** Hermetically sealed stainless-steel design • **Fully approved** No need to order options, all approvals in standard product	• **Reliable** Hermetically sealed stainless-steel design • **Fully approved** No need to order options, all approvals in standard product	• **Low Profile** Easy to integrate due to ultra-low profile • **Accuracy** Available in OIML C6/NTEP 10,000 when accuracy counts
Applications	Vehicle weighing, tank scales	Heavy capacity tank weighing, vehicle scales	Process-weighing tanks in food and pharma	Process-weighing tanks in food and pharma
Accuracy	OIML C3, C4; NTEP 10,000	OIML C3, NTEP 5,000	OIML C3, NTEP 5,000	OIML C3, C6; NTEP 5,000, 10,000
Hazardous	ATEX, UL, IECEx, Nepsi	ATEX, FM, IECEx, Nepsi	ATEX, FM, IECEx, Nepsi	ATEX, FM, IECEx, Nepsi
Material	Stainless steel, laser welded	Stainless steel, laser welded	Stainless steel, laser welded	Stainless steel, laser welded
Protection	IP68/IP69K	IP68/IP69K	IP68/IP69K	IP68/IP69K
Interface	POWERCELL	Analog	Analog	Analog
Junction Box	Not required	Required	Required	Required
More Information	**www.mt.com/loadcell**	**www.mt.com/loadcell**	**www.mt.com/loadcell**	**www.mt.com/loadcell**

S-Beam Load Cells
Scales for Suspended Structures

S-beam tension load cells are designed for use with suspended tanks, dosing hoppers and other devices that are suspended from a support structure. METTLER TOLEDO offers a wide range of load cell capacities to meet the needs of a variety of weighing applications.

▸ **www.mt.com/sbeam-lc**

Guideline for Accurate Filling Results

Successful integration of weighing:
- Filling methods
- Filling accuracy
- Weighing components

▸ **www.mt.com/ind-large-volume-filling-guideline**

	SLS410 50 kg – 7.5 t	SLS510 50 kg – 10 t	Accessories S-Beam Load Cells	Precision Junction Boxes
	• **Easy integration** Tension load cells are relatively easy to integrate if a suspended base is available • **Economic solution** Basic tension load cell for industrial weighing	• **Easy integration** Tension load cells are relatively easy to integrate if a suspended base is available • **Fully approved** No need to order options, all approvals in standard product	• **Threaded load introduction** Easy to integrate due to threaded load hole • **Rod end** Cope with expansion and angle deflection	• **Precise connection** Connects analog load cells the most accurate way possible • **All on board** All elements to fine trim scales are present
Applications	Suspended hoppers in dry environments	Suspended hoppers in harsh environments	Correct load introduction	Multiple load cell systems Hazardous versions available
Accuracy	Accuracy 0.03%	OIML C3, NTEP 5,000	n/a	Accuracy 0.01%
Hazardous	No	ATEX, FM	n/a	ATEX
Material	Nickle plated tool steel, potted	Stainless steel, potted	Stainless steel, potted	304 stainless steel, 316 stainless steel
Protection	IP65	IP67	n/a	IP67, IP69K
Accessories	Knuckle eye	Knuckle eye	n/a	n/a
More Information	**www.mt.com/sbeam-lc**	**www.mt.com/sbeam-lc**	**www.mt.com/sbeam-lc**	**www.mt.com/junctionbox**

Single-Point Load Cells
Easy System Integration

Single-point load cells are used individually in scales, hopper scales, process control systems, conveyor weighing, packaging machines and check-weighing systems. Moment-insensitive single-point load cells allow for eccentric loads and simplify weighing system design, as the load cell copes with all occurring forces and moments without losing performance.

▶ **www.mt.com/singlepoint-lc**
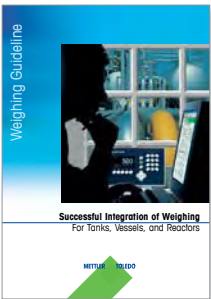
Vessel Guideline

Successful integration of weighing into:
- Tanks
- Vessels
- Reactors

▶ **www.mt.com/ind-vessel-guideline**

	MT1022, 1041, 1241, 1260 3 kg – 750 kg	SLP845 15 kg – 200 kg	SSH 50 kg – 1,000 kg	IL 150 kg – 2,000 kg
	• **Easy to integrate** Due to moment insensitive design, single-points are the easiest way to build accurate scales • **Fully approved** No need to order options, hazardous approvals in the standard product	• **Easy to integrate** Tension load cells are relatively easy to integrate if a suspended base is available • **Fully approved** No need to order options, hazardous approvals in the standard product	• **Easy to integrate** Due to moment insensitive design, single-points are the easiest way to build accurate scales • **Hermetically sealed** Laser-welded design for best reliability even in harsh environments	• **Easy to integrate** Due to moment insensitive design, single-points are the easiest way to build accurate scales • **High capacity** Scales with 2 t capacity can be built with one load cell only
Applications	Scales, filling, batching	Food and pharma scales, filling, batching	Food and pharma scales, filling, batching	Onboard weighing, filling systems
Accuracy	OIML C3, NTEP 5,000	OIML C3, NTEP 5,000	OIML C3, NTEP 5,000	OIML C3, NTEP 5,000
Hazardous	ATEX	ATEX, FM	–	–
Material	Aluminum, potted	Stainless steel	Stainless steel	Nickel-plated tool steel, potted
Protection	IP67	IP68/IP69K	IP68/IP69K	IP67
Platform Size (mm)	Up to 600 x 600	Up to 500 x 400	Up to 800 x 1,200	Up to 1,000 x 1,000
More Information	**www.mt.com/singlepoint-lc**	**www.mt.com/singlepoint-lc**	**www.mt.com/singlepoint-lc**	**www.mt.com/singlepoint-lc**

Our Solution
For Your Production

Automated Precision Weighing

WMS High-Precision Weigh Modules
Robust Precision Weighing

The WMS family is designed for high-precision automated weighing in instruments, machines and isolators. It features models with readabilities from 0.1 mg to 10 mg with weighing capacities from 120 g to 6,200 g. The compact design means that installation is straightforward and space-saving. Rugged stainless steel housing and wash-down features make it the ideal choice for integrated weighing in analytical and production applications.

▶ **www.mt.com/WMS**

Integrated Calibration Weight
The module can be checked at any time with the internal calibration weight. Adapters on the weighing pan do not have to be removed for calibration if they weigh less than 50% of full load.

High Precision
Designed to meet the most demanding customer specifications, the WMS is a high-speed high-accuracy weigh module with readability up to 0.1 mg.

Rugged Design
The 316L (1.4404) stainless steel housing with FDA-compliant seals and a rugged industrial plug connector with IP67 protection ensure high levels of reliability.

Flexible Platforms
Customer-specific adapters can easily be fixed to the square shaped weighing platform which is rigidly connected to the weigh module by means of a patented locking device.

Designed for Automation
Compact Precision Weighing

High precision, rugged design, and robust

Parameter		Models with internal adjustment			
		WMS104C	**WMS404C**	**WMS1203C**	**WMS6002C**
Maximum Capacity	nominal	120 g	410 g	1,220 g	6,200 g
Readability	nominal	0.1 mg	0.1 mg	1 mg	10 mg

Parameter		Models without internal adjustment			
		WMS204	**WMS403**	**WMS803**	**WMS4002**
Maximum Capacity	nominal	220 g	410 g	820 g	4,200 g
Readability	nominal	0.1 mg	1 mg	1 mg	10 mg
IP Protection (in operational state with weighing plate/platform in place)					
When Weighing (protected with double-labyrinth)		IP54			
When Cleaning Wash-Down (seal activated with 1 bar air pressure)		IP66			
Interfaces		RS232, RS422			
Materials		Stainless steel AISI316			
More Information		**www.mt.com/WMS**			

ISO 9001 registered
ISO 14001 registered
IP66

WMF High Precision Weigh Modules
Direct Automation Interface

The very high resolution of the weigh module – up to 2 million digits – enables the weighing of different container sizes on the same weigh module. The modules' very compact design includes power supply and industrial Ethernet connectivity without additional control cabinet space.

▶ **www.mt.com/WMF**

Plug & Communicate with Most Common PLC Systems
WMF is dedicated for use in automation. Connectivity via Ethernet/IP or PROFINET IO RT is incorporated in the space saving, compact unit. Fully engineered and comprehensive Device Description Files make PLC integration easy. The transferred weight value is ready to be used in the PLC program.

Comprehensive Overload Protection Assures Uptime
WMF weigh modules are designed to have a long service life because of their innovative overload protection against forces from all directions. This protects accuracy of the weigh module during normal operation but also in the event of malfunction.

Test Functionality and Accuracy at Any Time
The production process does not need to be interrupted for calibration with an external reference weight, since the module's internal weight can be used to check functionality.
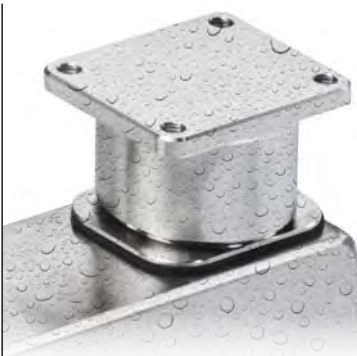
Protection Allows Liquid Rinsing for Clean-in-Place
Stainless steel housing (316L), FDA compliant sealing and the optional IP65 wash-down feature allow in-place cleaning procedures with water or liquid chemicals.

Designed for Automation
Tailored for Multi-Line Weighing

Compact size, integrated electronics, protected against overloads

Parameter		WMF204C	WMF303C
Maximum Capacity	nominal	220 g	320 g
Readability	nominal	0.1 mg	1 mg
Dynamics			
Signal Processing Output Rate	maximal	92/s	92/s
Settling Time (under good conditions)	typical	< 0.4 s	< 0.4 s
IP Protection			
When Weighing		IP44	
When Cleaning, Wash-Down (seal activated with 0.6 bar air pressure)		IP65	
Interfaces		Profinet IO RT, Ethernet/IP, Ethernet TCP/IP	
Materials		Stainless steel AISI316	
More Information		www.mt.com/WMF	

WKC High Precision Weigh Modules
Compact Precision Weighing

WKC weigh modules offer a compact and cost-effective solution for on-board weighing in automated applications where high resolution is needed. Standard M12 connectors and fully integrated electronics minimize integration efforts and enable quick and easy installation.

▶ **www.mt.com/WKC**

Compact Design
Fully integrated electronics help to save space in the machine/instrument design.
No additional unit is needed for communication. Weigh modules can be integrated in machines/instruments with tight space requirements.
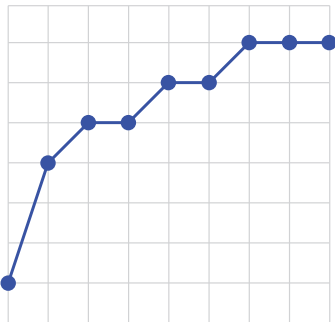
Easy Configuration
A computer-based software for parameterization, diagnostics, and data backup makes getting started easy. This allows the WKC weigh module to be customized for virtually any application.
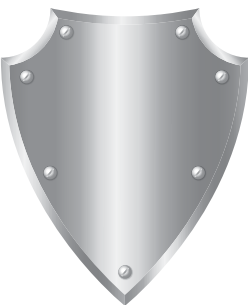
Robust
Stainless steel housing and coated connection cable protect the weigh module against external physical and electromagnetic influences. This ensures reliability of weight values and extends product life.

Quick Functionality Test
Thanks to the internal weight, it is possible to check correct functioning of the weigh module at any time, even with preloads. This saves calibration time and reduces down-time.
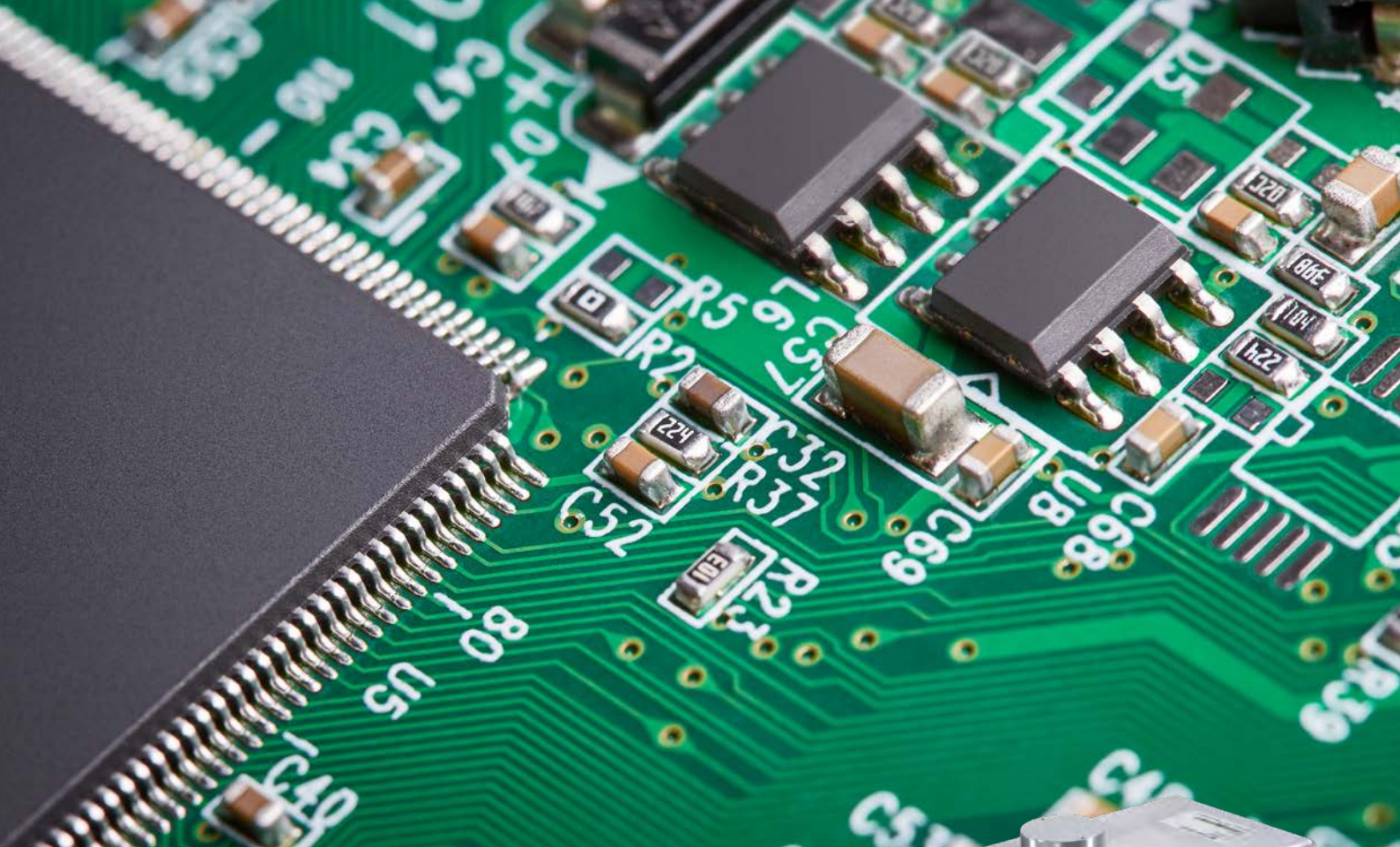
Designed for Automation
Compact Precision Weighing

High precision, rugged design, and robust

Parameter		WKC204C	WKC603C	WKC6002C
Maximum Capacity	nominal	220 g	620 g	6,200 g
Readability	nominal	0.1 mg	1 mg	10 mg
Interfaces				
Interfaces		RS422, bidirectional, full duplex, 2,400 to 38,400 bps		
Interface Update Rate (max.)		92 Hz		
Connector		M12, 12 p, male, A-coded		
Materials				
Housing, Base Plate		Stainless steel (EN 1.4307 / 304L)		
Weighing Pan		Stainless steel (EN 1.4307 / 304L)		
More Information		**www.mt.com/WKC**		

ISO 9001 registered   ISO 14001 registered   C E

WMC High-Precision Weigh Modules
The Smallest Footprint in Automation

The innovative WMC weigh module is the perfect combination of compactness and high accuracy. It exceeds the performance required for such modules and enables new applications, thus introducing new capabilities into the weighing technology field.

▶ **www.mt.com/WMC**

Small in Size, High in Performance
An innovation clearly differentiates itself from known solutions by offering a novel combination of function and design, which can in turn trigger new developments. The WMC weigh module is innovative because it combines high accuracy with minimum space requirements, allowing it to be installed almost anywhere along a production line.

Extremely Small and Compact
The ultra-compact WMC weigh module is ideal for integration into instruments and machines. Its very small width of 25 mm helps to keep overall dimensions of test and filling devices smaller than ever.

Very Fast Weighing
The low mass of the WMC weigh module protects against vibration. It enables very fast and accurate weighing with 92 filtered weight values sent via RS232 or Fieldbus to the control system.

High IP Rating
With the optional wash-down module, the unit has an IP54 rating when weighing and an IP56 rating during wash-down. Thus, it becomes possible to weigh in a dusty environment and use a wash-down cleaning process.

The New Dimension
In Automated Precision Weighing

Ultra-compact, precise and expandable

Parameter		WMC24-SH	WMC15-SH	WMC25-SH
Maximum Capacity	nominal	21 g	11 g	21 g
Readability	nominal	0.1 mg	0.01 mg	0.01 mg
Dynamics				
Settling Time*		0.6 s (3 x sd)	0.6 s (3 x sd)	0.7 s (3 x sd)
Interface Update Rate	max.	23/s (with terminal); 92/s (without terminal)		
General Data				
Degree of Protection		Load cell in use: IP30 / (IP54 with wash-down module)		
		Load cell in wash-down mode: IP56 (wash-down configuration)		
		Electronic unit: IP40		
		Terminal SWT und PWT: IP54		
Interfaces		RS232, Ethernet TCP/IP		
Materials		Stainless steel AISI316		
More Information		**www.mt.com/WMC**		

* The time between placing the weighed object on the weigh module and indication of a stabilized weight value under optimal environmental conditions.

WX High-Precision Weigh Modules
Maximum Precision for Automation

The WX family is designed for high-precision automated and manual weighing in instruments, machines and isolators. It features models with readabilities from 0.1 µg to 0.1 mg with weighing capacities from 22 g to 220 g. Compact design means that installation is straightforward and space-saving. The comprehensive overload protection and rugged plug-in connections are designed for use in analytical processes and production applications.

▶ **www.mt.com/ind-WXS**

Integrated Calibration Weights
Functionality, linearity, and precision can be checked at any time with two integrated calibration weights. Customer-specific adapters on top of the weighing pan do not need to be removed for calibration if they are less than 25% of full load.
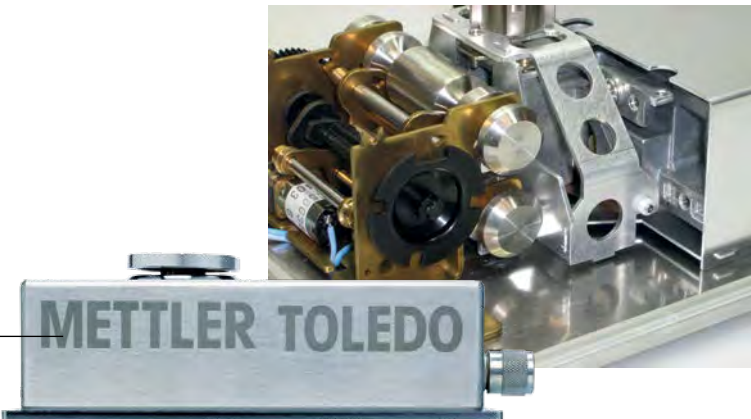
Adaptable Weighing Pan
The weighing pan has 3 holes to fasten customized adapters to hold vials or tubes. Adapters may weigh 1/3 of the capacity without restricting weighing range.

Flexible Layout and Assembly
The electronic unit can be installed separately from the weighing cell. The devices can be located up to 5 m apart. A set for optional DIN rail mounting is supplied with the modules.

Below-the-Module Weighing
An optional adapter allows weighing suspended loads below the weigh module. Overload protection is still assured in all directions.

Automated Weighing from Just 1 µg
Flexibility for Complex Solutions

Rugged design, high resolution and space saving installation

Parameter		26	26DU	205	205DU	204
Maximum Capacity	nominal	22 g	22 g	220 g	220 g	220 g
Readability	nominal	0.001 mg	0.01 mg	0.01 mg	0.1 mg	0.1 mg
Maximum Capacity, Fine Range	nominal	–	11 g	–	111 g	–
Readability, Fine Range	nominal	–	0.001 mg	–	0.01 mg	–
Zero Setting Range (legal-for-trade versions)		20 g	20 g	20 g	20 g	20 g
Interfaces		RS232, Ethernet TCP/IP				
Materials		Stainless steel AISI316				
More Information		**www.mt.com/ind-WXS**				

ISO 9001 registered ISO 14001 registered OIML

PBK9 Weighing Platforms
High Resolution in Harsh Environments

Accurate weighing helps you manage raw materials, ensure compliance with regulations and improve your product quality. For bench and floor scale applications that require reliability with the best accuracy available, PBK9 Weighing Platforms provide outstanding performance. A range of platforms with capacities from 0.6 to 300 kilograms and resolutions of up to 750,000 divisions are useful for many applications.

▶ **www.mt.com/PBK9**

Outstanding Accuracy
Thanks to its innovative measuring technology, PBK9 Weighing Platforms ensure industry-leading metrological performance. With a resolution of up to 750,000 divisions, the weighing platform is ideally suited for all weighing processes in which quality is critical and tolerances need to be minimized.
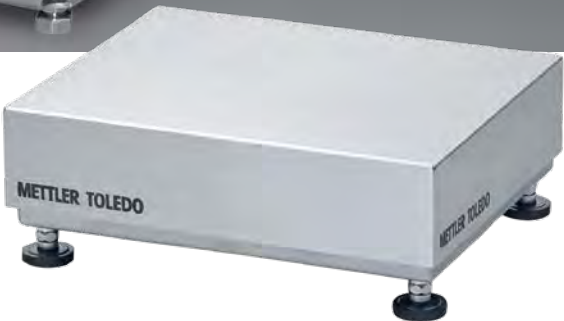
Smart Load-Cell Technology
The Monobloc technology load cell is at the core of PBK9 Weighing Platforms. Advanced technology guarantees the highest precision and reliability.

Reliable Process
PBK9 sensors always deliver reliable and exact results – even in the most difficult environments. This ensures you are always on the safe side when running formula, dosing and quality check applications.

Direct Connectivity
PBK9-APW weighing platforms can be directly connected to any automation system via RS422 or RS485 and serviced with an additional RS232 interface.

Accurate Weighing
From Ultra-Light to Heavy-Weight

High-precision weighing, reliable in harsh conditions, fast weighing processes

Platform Type	A3	A6	AB15	AB30	AB60	B60	B120	CC150	CC300
Capacity	3 kg	6 kg	15 kg	30 kg	60 kg	60 kg	120 kg	150 kg	300 kg
Readability	0.005 g	0.01 g	0.02 g	0.05 g	0.1 g	0.1 g	0.2 g	0.2 g	0.5 g
Platform Dimensions	275 x 345 mm		280 x 350 mm			400 x 500 mm		600 x 800 mm	
Interfaces	RS232, RS422/RS485								
Update Rate	92 weight values per second								
IP Rating	IP66/IP68								
Load Plate Material	Stainless steel AISI304 as standard, stainless steel AISI316 available as option								
More Information	**www.mt.com/PBK9**								

ISO 9001 registered   ISO 14001 registered   IP66   IP68

PFK9 Weighing Platforms
Maximum Precision for High Loads

Accurate weighing helps you manage raw materials, ensure compliance with regulations and improve your product quality. For bench and floor scale applications that require reliability with the best accuracy available, PFK9 Weighing Platforms provide outstanding performance. A range of platforms with capacities from 300 to 3,000 kilograms and resolutions of up to 750,000 divisions are useful for many applications.

▶ www.mt.com/PFK9

Outstanding Accuracy
Thanks to its innovative measuring technology, PFK9 Weighing Platforms ensure industry-leading metrological performance. With a resolution of up to 750,000 divisions, the weighing platform is ideally suited for all weighing processes in which quality is critical and tolerances need to be minimized.

Direct Connectivity
PFK9 APW weighing platforms can be directly connected via plug-in cables to many process-control systems for safe, easy integration.

Safe in Hazardous Environments
When working in a hazardous environment, safety is critical. PFK9 weighing platforms are approved for use in hazardous areas classified Category 3, Division 2 for top performance in gaseous and dusty environments.

Direct Connectivity
PFK9-APW weighing platforms can be directly connected to any automation system via RS422 or RS485 and serviced with an additional RS232 interface.

Accurate Weighing
From Ultra-Light to Heavy-Weight

High-precision weighing, reliable in harsh conditions, fast weighing processes

Platform Type	C300	C600	D600	D1500	E1500	E3000	ES1500	ES3000
Capacity	300 kg	600 kg	600 kg	1,500 kg	1,500 kg	3,000 kg	1,500 kg	3,000 kg
Readability	0.5 g	1 g	1 g	2 g	2 g	5 g	2 g	5 g
Platform Dimensions	800 x 1,000 mm		1,000 x 1,250 mm		1,250 x 1,500 mm		1,500 x 1,500 mm	
Interfaces	RS232, RS422/RS485							
Update Rate	92 weight values per second							
IP Rating	IP66/IP68							
Load Plate Material	Stainless steel AISI304 as standard, stainless steel AISI316 available as option							
More Information	www.mt.com/PFK9							

ISO 9001 registered ISO 14001 registered IP66 IP68 Ex

SLP85xD Load Cells
Designed for Fast Filling Processes

To be ready for a competitive future, production equipment requires intelligent, high-performing measurement technology. SLP85XD load cells provide fast filling of liquid foods and chemicals. They also enable quick sorting and grading. Real-time status information sent to a PLC can help operators avoid unplanned downtime by allowing necessary preventive maintenance.

▶ **www.mt.com/SLP85xD**

Plug & Communicate with Most Common PLC Systems
SLP85xD is dedicated for use in automation. Connectivity via PROFIBUS DP, EtherNet/IP or PROFINET IO RT is incorporated in the space saving, compact unit. Fully engineered and comprehensive Device Description Files make integration with a PLC easy.

Comprehensive Overload Protection Assures High Uptime
SLP85xD family load cells have a robust, integrated overload protection which protects them against upward and downward forces of up to 100 kg.

Cleaning with High-Pressure Water Jets and Chemicals
A robust stainless steel load cell body and high ingress protection with hermetic sealing according to IP69K permit aggressive disinfection procedures which are typical in the food processing industry.

Diagnostic Features for Quality & Performance Assurance
The load cell monitors its status and forwards information to the PLC to alert operators to issues which might cause unreliable weight values or future equipment failure.

Fast, Compact & Intelligent Weighing
High Productivity in Harsh Environments

Direct PLC connectivity, diagnostic features, robust design, easy-to-clean

Parameter	SLP850D	SLP852D	SLP854D
Integrated Application	None	Filling	Filling
Digital IO	None	None	3 inputs, 5 outputs
Maximum Capacity	10 kg / 20 kg		
OIML Class	C3		
Default Readability	1 g / 2 g		
Repeatability Error	≤ 0.01% of the applied load		
Power Supply Voltage	10 … 30 V DC		
Interfaces	EtherNet/IP, PROFINET IO RT, PROFIBUS DP		
IP Rating	IP68 / IP69K		
Materials	Counterforce: Stainless steel 17–4 PH, Connector: Stainless steel SUS304, Cable: PU		
More Information	**www.mt.com/SLP85xD**		

Vehicle Scales

Vehicle Scales
To Fit Any Operation
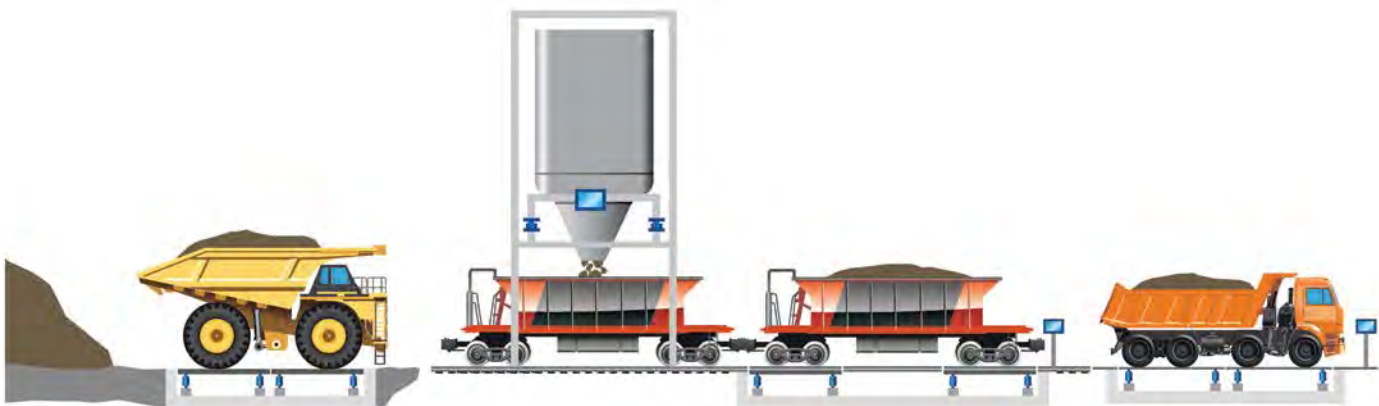
Vehicle Scale Variety
Designed for Your Business

METTLER TOLEDO protects your business by supplying you with accurate and reliable truck and rail scale solutions designed to thrive in any work environment. Whether your concern is a high volume of traffic, hazardous area, extreme weather, or all of the above, we offer the right fit based on your needs.

▸ **www.mt.com/vehicle**

Our comprehensive design, analysis and testing program enables us to deliver scales proven to meet the demands of your weighing application. No other company tests weighbridges this thoroughly.
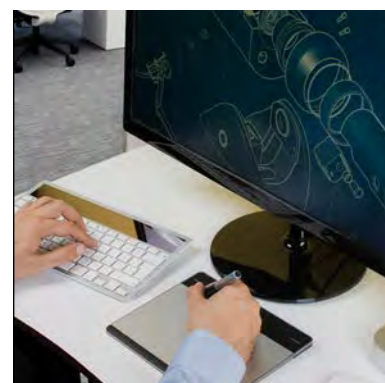
Design
Throughout more than 20 years of CAD modeling, we have refined our designs to offer the best weighbridges available. Our engineers continue to innovate and build on the success of previous designs.

Testing
METTLER TOLEDO is the only manufacturer that performs true lifecycle testing on all weighbridge models. Our unique Module Masher applies 20 years of traffic in 6 to 8 weeks.
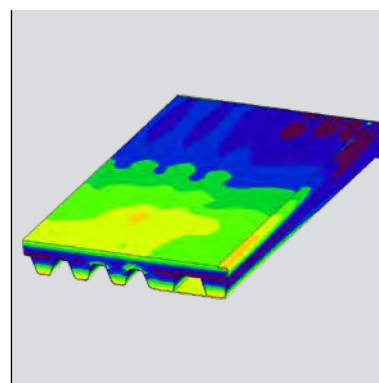
Analysis
Finite-element analysis shows how a weighbridge design should perform under various loading conditions. Analyzing all areas of the weighbridge allows for improvements in design.

Keep Your Business Moving

A vehicle scale will have a long-term impact on your operation. In many cases, it is vital to your ongoing productivity and profitability. With a full range of weighbridges/truck scales and railroad scales, METTLER TOLEDO can work with you to find the right weighing solution to keep your business moving.

With industry-leading load-cell technology, software, and services – METTLER TOLEDO is your one stop shop for all things vehicle scale.

Truck and Rail Scale Models
Durability You Can Trust

METTLER TOLEDO vehicle scales are manufactured to the highest quality by a team of skilled engineers and welders, and then subjected to true lifecycle testing. The resulting scales are ruggedly dependable weighing machines that are made to perform.

▶ **www.mt.com/vehicle**

Learn More:
Unmatched Validation Testing
Learn more about life-cycle testing with the module masher.

▶ **www.mt.com/weighbridgetesting**

Steel Deck Truck Scales

Sleek yet durable, steel deck truck scales offer unsurpassed versatility

- **Quick-install**
  With no wait time for concrete curing, turn around time to a working scale can be as short as one day
- **Water tight bridge**
  Continuous welds and superior paint specifications deter corrosion
- **Sturdy design**
  Orthotropic ribs distribute weight from heavy loads to the strongest part of the scale

Concrete Deck Truck Scales

Rugged and dependable, concrete deck truck scales can endure the extreme

- **Slip resistant surface**
  Concrete deck scales provide superior grip in slippery conditions
- **Robust design**
  A concrete and steel hybrid structure designed to last
- **Customization available**
  Galvanization of the weighbridge offers additional protection from the elements

Railroad Scales

Strength and durability built to stand up to the massive loads of rail traffic

- **Strength**
  Proven structural designs to stand up to the most demanding applications
- **Longevity**
  Superior materials and manufacturing ensure long life, even with years of heavy loads and challenging environments
- **Versatility**
  Truck and rail scale combinations meet multiple needs in one scale to save space and money

	Steel Deck	Concrete Deck	Railroad
Weighbridge Types Available	Multi-module	Multi-module	Multi-module
Construction	Orthotropic steel ribs	Hybrid – steel deck pan, concrete deck	Steel or concrete deck, welded steel beams
Scale Lengths Available	3 to 42.7 m (10 to 140 ft)	3 to 42.7 m (10 to 140 ft)	3.8 to 22.8 m (12 to 75 ft)
Axle Load Range	22 t (low) to 114 t (high)	22 t (low) to 40 t (high)	85 t per axel set
Foundation Compatibility	Above ground, shallow or deep pit	Above ground, shallow or deep pit	Shallow pit
Shipping Requirements	Standard or container, per model	Standard or container, per model	Standard
Customizable	Yes	Yes	Yes
More Information	**www.mt.com/vehicle**	**www.mt.com/vehicle**	**www.mt.com/rail-scales**

Remote Displays
For Weight Results from a Distance

Remote displays allow truck drivers and other personnel to see weights at locations other than where the scale terminal is mounted. The bright LED display is easy to read day and night. Three sizes are available with viewing distances of up to 80 m. Options include a built-in red/green traffic light and wireless communication betweeen the display and the scale terminal. A durable aluminum enclosure makes the remote displays suitable for indoor and outdoor use.

POWERCELL® PDX® Load Cells
Protect Your Profits

POWERCELL® PDX® load cells have revolutionized vehicle weighing. With their unique design, they eliminate the weak link in any vehicle scale: the junction box. This simple improvement pays off with lower maintenance bills and less downtime.

▸ **www.mt.com/NoJunctionBoxes**

Failed load cells can cost you tons in maintenance and repair. Avoid these headaches by investing in a more reliable load cell – POWERCELL® PDX® load cells.

Simplified Network
POWERCELL® PDX® load cells connect to one another in a simple network that transmits individual load cell signals to the terminal, eliminating the need for a junction box.

Testing
A built-in diagnostics system gives you real-time data about the condition of each load cell, including weighing errors, environmental conditions, overloading, network health and voltages.

Environmental Protection
With lightning protection tested to 80K amperes and an LC system that is completely waterproof, there is no denying the versatility of the POWERCELL® PDX® load cell system.

Simplified Network
POWERCELL® PDX® load cells connect to one another in a simple network that transmits individual load cell signals to the scale terminal, eliminating the common problems caused by junction boxes.

10 Year Warranty

Ask your local representative for details about the new 10-year warranty

Proven Accuracy

POWERCELL® load cells have demonstrated their ability to weigh more accurately than all types of analog load cells. If you buy and sell goods by weight, increased accuracy can be crucial to your profitability.

Calibration tests from thousands of real-world truck scales prove that POWERCELL® load cells are significantly more accurate than analog load cells. What makes them more accurate:
- Ability to calibrate to a high level of accuracy
- Use of digital compensation to maintain accuracy

▸ **www.mt.com/PDXaccuracy**

OIML   NTEP   CE

POWERCELL® Load Cells
Reliability You Can Count On

POWERCELL® load cells protect your business by ensuring that your vehicle scale weighs accurately day in and day out. This revolutionary technology cuts your operating costs by minimizing errors, reducing downtime, and simplifying service.

▸ **www.mt.com/powercell**

Learn More: Upgrading Your Vehicle Scale
Get information about Vehicle Scale upgrades.

▸ **www.mt.com/UpgradeToPDX**

	POWERCELL® PDX®	VKR: POWERCELL® Upgrade and Conversion Kit	POWERCELL® GDD®	POWERCELL® MTX®	0782 Analog Load Cells
	The highest level of accuracy and reliability	All of the benefits of a new PDX load cell system at a fraction of the cost of a new scale	Digital accuracy and reliability at an economical price	Digital quality, accuracy and reliability perfect for hazardous areas	Trusted technology from the most trusted brand
	• **Simplified network** Ease of servicing with quick-connect cables and no junction boxes • **Environmental protection** Water-tight load cells and cables make for a network that is 100% submersible • **Proven accuracy** Accurate transactions on the truck scale make for less product give away	• **Improved accuracy** Improved accuracy will be noticeable immediately for quick ROI • **Easy installation** Technicians can usually complete a vehicle scale upgrade in one day • **Decreased maintenance** Improved reliability means less cost for maintenance and repairs	• **Digital accuracy** Easily calibrated to a high level of accuracy, built-in compensation • **Diagnostic capabilities** Allows you to view individual load-cell outputs on the scale terminal • **Cost-effective investment** Provides proven accuracy and reliability at an economical price	• **Hazardous area approved** Provide safe weighing in ATEX/FM Zones 1/21 and 2/22 hazardous areas • **Digital accuracy** Easily calibrated to a high level of accuracy, built in compensation • **Time-tested** Trusted POWERCELL® brand	• **Versitle use** Can be used in many applications that require reliable weighing at a value • **Time tested** A trusted load cell for many years • **Hazardous area approvals** ATEX/FM Zones 1/21 and 2/22
Capacity	20 t, 30 t, 50 t, 90 t	20 t, 30 t, 50 t, 90 t	20 t, 30 t, 50 t	25 t, 45 t, 90 t	20 t, 30 t, 50 t, 100 t
Accuracy	High	High	High	High	Mid
Communication	CAN	CAN	CAN	Bitbus	Analog signal
Network	No junction box	No junction box	Junction boxes	Junction boxes	Junction boxes
Diagnostics	Yes	Yes	Yes	No	No
Lightning Protection	> 80,000 A	> 80,000 A	> 29,000 A	> 10,000 A	Not rated
Breach Detection	Yes	Yes	No	No	No
More Information	www.mt.com/powercell	www.mt.com/powercell	www.mt.com/powercell	www.mt.com/powercell	www.mt.com/powercell

Vehicle Scale Software
Manage Smarter

METTLER TOLEDO integrated software solutions save you time and money by giving you complete control of your weighing operation. DataBridge™ software along with industry-leading terminal options allow you to process transactions quickly and accurately to keep traffic moving.

▸ **www.mt.com/DataBridge**

Integrated Scale Technology

Integrating data management software with your terminals and load cell system can improve your processing speed, inventory tracking, site connectivity and overall ease of operation. With a highly graphical and intuitive interface, DataBridge™ by METTLER TOLEDO is user friendly and adaptable to any operation. Special features include tare weight storage, weight curve capture, advanced transaction history and reporting, and the ability to sync with accessories such as lights, gates, loops and more.

Why Use Data Management Software

Even if you have an extremely durable and accurate scale, without good data-management software, profits could be slipping through the cracks. Protect your business with DataBridge™ technology by METTLER TOLEDO.

Improved Connectivity

DataBridge™ technology improves all aspects of connectivity for your business. Breach detection technology alerts you at the first sign of a problem. Share information between locations within an efficient and secure interface.

Unattended Solutions

DataBridge™ unattended software enables truck drivers to complete their own weighing transactions in seconds, reducing cost by eliminating the need for a round the clock operator. Ideal for scales in remote locations and facilities with multiple scales.

Benefits of DataBridge™:
- Better tracking of inventory and profits with reporting functionality
- Streamlines operations by going paper free
- Faster transaction times to weigh more vehicles per day
- Options for customized application design
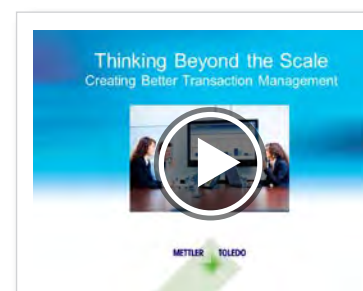
Watch Our Free On-Demand Webinar:

Thinking beyond the scale

▸ **www.mt.com/veh-beyondthescale**

Parcel and Pallet Dimensioning, Weighing and Scanning

10

Our Solution
For Your Production

Cargo Limited

Cargo Limited

Dynamic Weighing
Integrate into any Sorting System

METTLER TOLEDO dynamic parcel scales are designed for seamless integration into any conveyor or sorting system. Choose from a variety of sizes, configurations and accessories to meet your individual operational requirements.

▶ **www.mt.com/dynamic-parcel**

A flexible weighing point can increase scale throughput by up to 30%. The weighing time is determined based on parcel length to optimize parcel gapping.

Plug and Play Integration
Dynamic scales offer seamless integration with dimensioners, barcode readers and conveyors. Choose from a selection of standard interfaces or request a customized protocol.

Flexible Design
Tailor-build your system based on a number of standard designs. Choose weighing-only or a turn-key dimensioning, weighing and scanning system.

Fast Data Communication
A real-time controller ensures high-speed data communication with the sorter. The data drop-point can be configured based on sorting requirements.

Smart Filter Technology

METTLER TOLEDO dynamic scales use state-of-the-art load-cell technology to achieve top weighing accuracy at any speed, in all conditions.

Advanced technology filters out environmental disturbances such as vibrations from motorized systems which can negatively impact results.

Combined with a rugged, robust design, this feature works to ensure high precision and reliability in tough conditions including mezzanine installation or installation within a high-speed sorting system.

Dynamic Dimensioning
See More Revenue

With the ability to accurately obtain dimensions of difficult-to-measure packages of any shape at high speeds and in mass-flow sorts, METTLER TOLEDO dimensioners provide read rates and revenue recovery that others cannot match.

▸ **www.mt.com/dimensioning**

With larger optics that let in more light and a wider dynamic range, METTLER TOLEDO dimensioners provide the best read rates in their class.

Industry-Leading Read Rates
Measure black, blue, glossy or bright parcel surfaces with precision for maximum revenue recovery and fewer rejects.

Highest Accuracy and Precision
Achieve high accuracy and repeatable results on any type of package. Every milimeter counts when it comes to invoicing.

Any Application
Whether you measure in a high-speed sorting line or a mass-flow induction line, we have a dimensioner for any application.

Any Speed, Any Shape
Dynamic Parcel Dimensioning

Dimensioning Solution	CSN950	CSN950 MultiHead	CSN210 MassFlow
Singulated Regular Shapes	Yes	No	No
Singulated Known Shapes	No	Yes	No
Touching Regular Shapes	No	No	Yes
Mass-Flow Irregular Shapes	No	No	Yes
Max. Size (LxWxH)	4,000 x 900 x 900 mm	4,000 x 1,600 x 1,200 mm	3,000 x 1,200 x 920 mm
Min. Size (LxWxH)	50 x 50 x 20 mm	50 x 50 x 20 mm	Singulated: 50 x 50 x 25 mm Touching: 100 x 50 x 25 mm
Belt Speed	3.3 m/s	3.3 m/s	1.2 m/s
Legal for Trade Accuracy (LxWxH)	5 x 5 x 2 mm	5 x 5 x 2 mm	Object length ≤ 3,000 mm: ±5 mm; Object length 3,000– 5,000 mm: ±10 mm
More Information	**www.mt.com/CSN950**	**www.mt.com/CSN950**	**www.mt.com/CSN210**

CSN810 TableTop™
Improve Manual Operations

The CSN810 TableTop™ can be easily set up in any type of parcel handling operation. The compact workstation captures parcel dimensions, weight and ID in low-to-medium throughput operations or the hospital area of an automatic sorting system.

▸ **www.mt.com/CSN810**

When built into the hospital area of an automatic sorting system, the CSN810 TableTop offers the ideal solution for capturing data on rejected parcels.

Fast, Paper-Free Measuring
Improve productivity by automating the measuring process. Simply scan the barcode and capture dimensions and weight automatically.

Simple Integration
Simple set-up and seamless communication to IT systems means the CSN810 is easily incorporated into existing processes.

Easy to Use
A user-friendly graphical interface and ergonomic system design requires little operator training. Accurate, reliable results are guaranteed.

Static Dimensioning, Weighing & Scanning
CSN810 TableTop™

The CSN810 TableTop is supplied with either a flat or roller table. It also comes in an extra-large version where the flexibility to measure larger goods is required. Specifications vary depending on the model selected.

Dimensioner Accuracy	± 5 mm
Dimensioning Range (LxWxH)	Min. object size: 50 x 50 x 50 mm Max. object size: 1,200 x 900 x 900 mm
Weighing Range	0.4 kg – 150 kg
Scale Resolution	± 20 g
Object Throughput	Approx. 400 per hour
Measurement Time	3 seconds
Object Shape	Rectangulars
More Information	www.mt.com/CSN810

CSN840 Pallet™
Profitable Pallet Handling

Robust pallet measuring solutions calculate the dimensions and weight of pallets in one step for correct classification, pricing and invoicing. Mounted overhead and out of the way of forklift traffic – and with a measurement time of just three to four seconds – the CSN840 pallet helps to maintain efficient operations.

▶ **www.mt.com/CSN840**

OCTO ImageCapture™ takes a picture of each shipment for proof of condition, content and measurement using a legal-for-trade system.
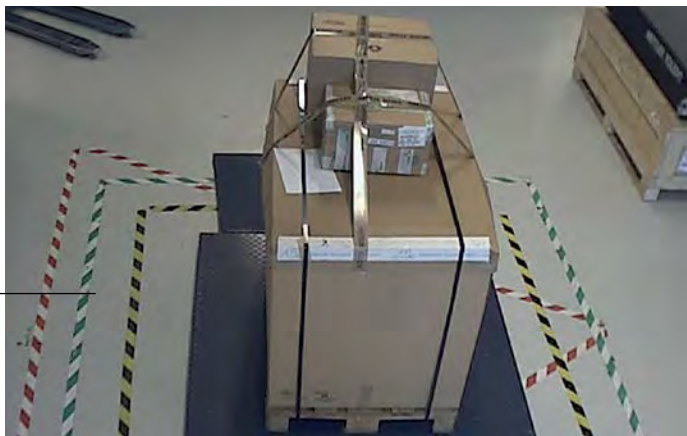
Any Shape, Any Surface
Three measuring heads see pallets from all angles for accurate measurement of any shape. Large optics let in enough light to handle any surface, even black plastic.

Flexible Design
Overhead mounting keeps the system clear of forklift traffic. Choose from a ceiling or wall mount and interface with your choice of floor or forklift scale.

Robust and Reliable
No moving part protects the system from wear and tear. Little maintenance is required, and the robust design ensures low cost of ownership and long life.

Pallet Dimensioning
CSN840 Pallet™

The CSN840 Pallet is fully approved by global weights and measures authorities and offers high accuracy for all pallet shapes and surfaces.

Dimensioner Accuracy	± 20 mm
Dimensioning Range (LxWxH)	Min. object size: 200 x 200 x 200 mm Max. object size: 2,500 x 2,500 x 2,600 mm
Object Throughput	Approx. 200 per hour
Measurement Time	3–4 seconds
Object Shape	Any shape
Surface Characteristics	Most surfaces
Orientation	Most stable side down

11

Custom Systems and Drumfillers

Achieve the Needs of Your Application

Solve your Filling Solution Needs

Custom Systems and Drumfillers
Our Solution for Your Production
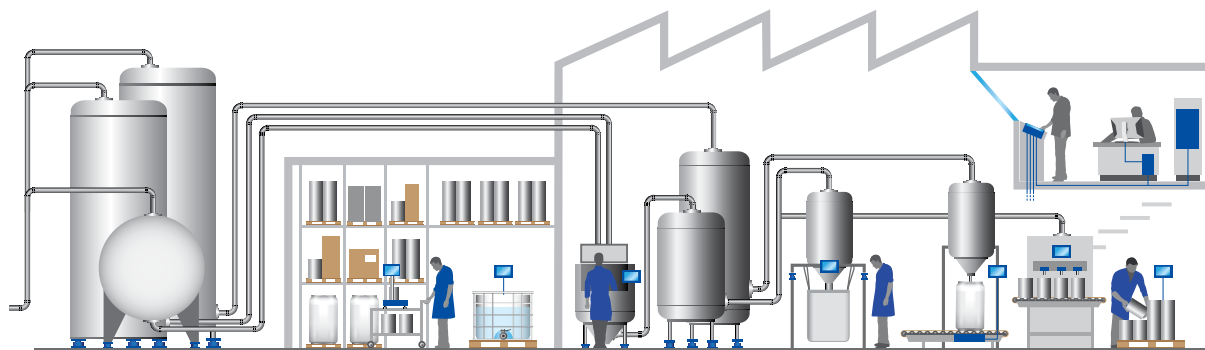
Achieve the Needs of Your Application
With Custom Systems

Standard products sometimes don't meet the needs of an application. We approach your unique application with years of experience building custom weighing solutions including OEM applications, automation, In-Motion weighing, hazardous area systems, and more. Systems arrive ready to go complete with engineering drawings and installation instructions.

▸ **www.mt.com/service**

METTLER TOLEDO custom systems are designed to fit your unique application. We design hazardous area systems, custom terminal hardware/software solutions, in-motion controllers, batching & filling controllers, bulkweighing controllers, I/O assembly, TaskExpert® programs, C++ and C# programs, and scale to PLC communications.

Hazardous Area Solutions
Custom class and division rated hazardous solutions fulfill a number of regulatory requirements to fit unique needs in any industry. Options include purged enclosures, intrinsically safe barriers, explosion proof lights, and many more.

Custom OEM Solutions
Meet OEM specifications with and IND780 with a custom TaskExpert application, integrated PLC, and EtherNET/IP communication.

Custom Packaged Controllers
Customize IND570/780 packaged controllers with indicating lights, pushbuttons, selector switches, relays, PLC's, opto modules, heaters/fans, cord grips and conduit hubs, enclosure type and material.

We offer a quick ship option for five of the most common custom packaged terminals. These preconfigured options can be shipped faster than standard custom system orders. They include:

- IND570 Analog w/ 2 operators and E-stop
- IND570 Analog w/ 2 operators and E-stop
- IND570 Analog w/ EZ-clean lift deck controls
- IND780 Analog w/ no operators
- IND780 Analog w/ 4 operators and E-stop

Solve Your Filling Solution Needs
With Drumfillers

METTLER TOLEDO offers drumfilling solutions with customizable options to suit your needs. Solutions are engineered to order and are capbale of single drum, single tote, and mutli-drum. In addition, purge, safe area, and standard panel controller options are available depending on your needs.

▶ **www.mt.com/service**

METTLER TOLEDO drumfillers are designed to fit your needs. We offer a variety of drumfiller options designed to fill single 55 gallon drumfillers, 275 & 330 gallon totes, and sets of (4) 55 gallon drums on pallets and totes.

Single Drum
We offer a simple single 55 gallon drumfiller as our most basic solution. The unit is a fill-by-weigh system that can be set for top fill or subsurface fill. A conveyor option is offered as well.

Single IBC or Tote
Intermediate bulk containers (IBC) or totes up to a maximum of 330 gallons can be filled with these units.

Multi-Drum
The easy-to-operate swivel arm allows the operator to adjust the lance over each drum opening. A breaking system holds the arm in place when set. Also capable of filling totes.
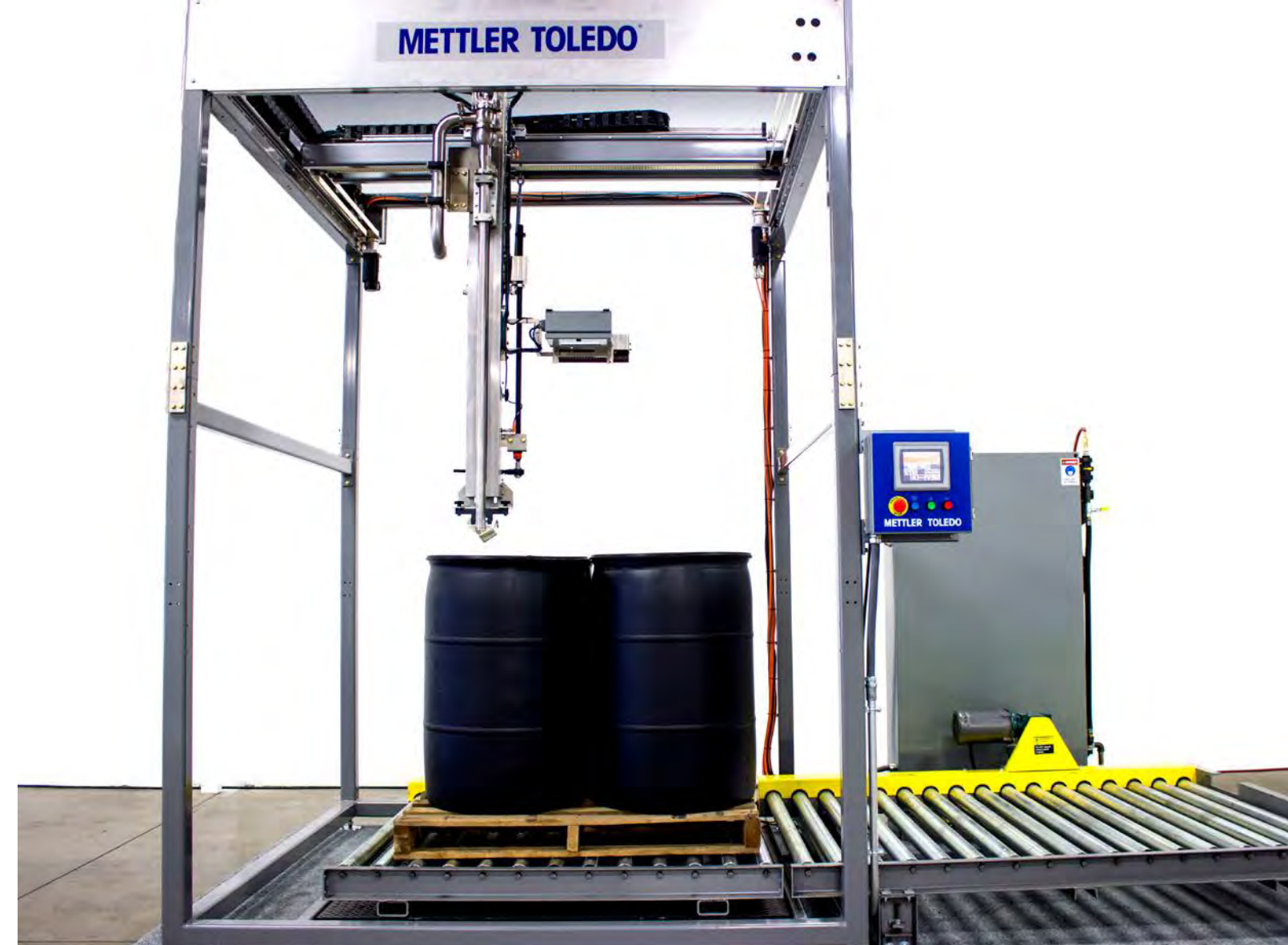
The Automatic Vision System is our most advanced offering. It is configurable with multiple conveyors and will run as long as there is an empty container on the scale. A photo eye makes sure the containers are correctly located on the scale and indexes the pallets to the next location on the conveyors. This allows operators to tend to other duties while the filler is running.

Providing Service Solutions
Across Your Value Chain

Providing Service Solutions
Across Your Value Chain

Whatever the application, we provide you with a tailor-made service solution independent of industry, environment or regulation based on our four values: Uptime, Performance, Compliance and Expertise. We support you in mastering your daily challenges. This helps you guarantee product quality, on-time deliveries, regulatory compliance and appropriate user competences.

▶ **www.mt.com/service**

Automated Production · Engineering & Inventory Control · Material Receiving · Quality Control Lab · Manual Production · Packaging & Filling · Logistics
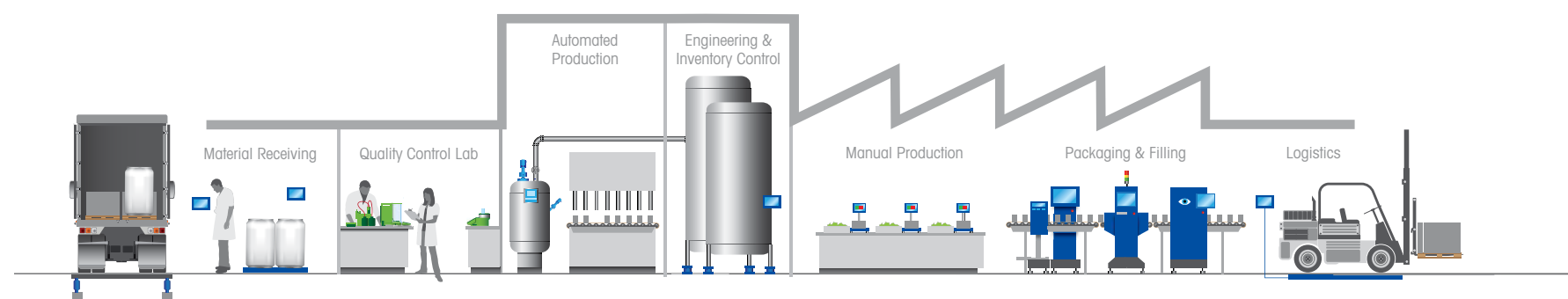
Our instruments meet the highest technical standards.
Are you aware of your most important performance-assurance needs?

Are fast intervention and turn-around times crucial to meet your shipment & delivery dates?

Uptime
You require every minute of up-time. This means guarding against equipment breakdown, parts failure and "wear and tear" issues.

Are your measurement results meeting productivity, quality and regulatory requirements?

Performance
With periodic preventive maintenance, you achieve consistently accurate results, avoiding unexpected downtime and saving money.

Does the accuracy of your measurement equipment meet your quality requirements?

Compliance
Whether you operate under ISO 9001 or strict pharmaceutical regulations, you require documented testing procedures and an accepted calibration certificate.

Do you know how to apply metrological concepts, safety procedures and food and pharma standards to optimize your process?

Expertise
Ensure you get trained and consulted on measurement technology, regulations and applications.

Over 5,000 Factory-Trained Service Specialists Worldwide

Global Presence
We serve our customers worldwide with one of the largest sales and service networks in the industry to assist you in increasing the efficiency, cost-effectiveness, safety and reliability of your operational processes. Our geographically-focused market organizations ensure close relationships with users. These organizations have the flexibility to adapt support and service offerings to different user requirements.

Our factory-trained and authorized service technicians help guarantee:
• Continous operational manufacturing quality and maximized uptime.
• Comprehensive, audit-proof and fully traceable electronic certificates.
• Consistency in procedures and certified, traceable tools.
• Highest operational performance for your compliance needs with combined equipment installation and qualification.

A Complete Service Offering
For the Entire Product Life Cycle

We support and service your equipment throughout its entire lifecycle, from installation, preventive maintenance and calibration to equipment repair. Our experience across these areas helps us offer you high-quality service. Through efficient practices, we minimize costs throughout the service call – an important feature that distinguishes us from our competitors.

▸ **www.mt.com/service**

Lifetime Peak Performance
With METTLER TOLEDO, you selected the most precise and reliable equipment possible and we want to ensure your absolute satisfaction over the lifetime of your equipment. Discover more about our service expertise and the benefits we can provide to you through all stages of the product's life cycle.

Installation, Qualification and Warranty

With the combination of professional installation, setup, configuration, user training and documentation, we ensure the highest operational performance possible.

Maintenance

With three different types of Care Packages, you achieve consistently accurate results, avoid unexpected downtime and save money over the life of the equipment.

Calibration

Calibration is the key to quality. Gain confidence in your measurements with our industry-leading metrology expertise.

Knowledge

Operating your equipment at optimal performance requires knowledgeable and well-trained operators, traceable and standardized documenta-tion, and tools for quality assurance.

Repair & Support

Fast intervention and turn-around times are key to minimizing downtime. METTLER TOLEDO's large field force, original spare parts, and remote technology all come together to provide maximum uptime.

Service Selection Made Simple

METTLER TOLEDO provides you with the confidence to enhance your efficiency, performance and productivity by providing products based on our service values. Select the package that fits your operational needs to maximize your investment.

Uptime
Repair & Support
- Repair Service
- Spare Parts and Kits
- Remote Service

Performance
Maintenance & Optimization
- Professional Installation
- Preventive Maintenance
- Upgrade and Refurbishment
- Setup and Configuration
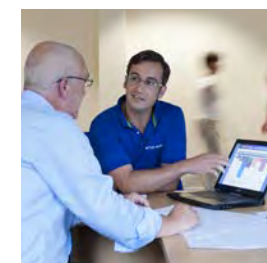
Compliance
Calibration & Quality
- Calibration and Certificates
- Equipment Qualification
- Performance Verification
- GWP Verification

Expertise
Training & Consulting
- User Training
- Consulting and Business Support
- Documentation and Downloads
- Good Weighing Practice

Installation and Extended Care
Ensure a Perfect Start

You expect your new equipment to fulfill all requirements right from the start. Our factory-trained service engineers install your instrument according to the manufacturer's requirements and carry out practical operator training. A safe, routine operation is ensured so you can meet quality and regulatory standards from the beginning.

▶ **www.mt.com/service**

StarterPac

The StarterPac is designed for professional product installations and solid user familiarization in low-regulation or unregulated industries.
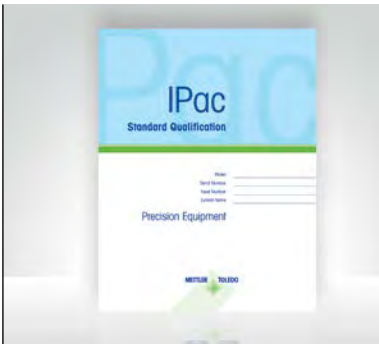
IPac

The IPac is designed for regulated industries with the need for ensuring that products are safe and of a consistently high quality.

Extended Care - Reliable Results,
Secured Uptime and Full Cost Control

The first year of equipment operation is essential to ensure ongoing performance. The Extended Care Program protects your investment beyond the limited scope of the legal warranty with regular testing and maintenance, priority on-site service and technical hotline assistance.

Coverage	Regular Warranty	ExtendedCare
Preventive Maintenance	12 months	24 months
Annual inspection and cleaning, annual performance tests to manufacturer standards, adjustments if necessary, replacement of worn-out parts		●
Coverage in Case of Technical Problems	12 months	24 months
First year of warranty, labor cost included		●
Intervention on-site	●	●
Additional year of warranty, priority for intervention, travel cost included, hotline technical assistance	Only for some equipment, mail-in otherwise	●
More Information		**www.mt.com/service**

Save time and be safe right from the start! METTLER TOLEDO installation ensures:

✓ Measurement accuracy thanks to expert installation and initial qualification

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✓ Proof of optimum equipment performance

✓ Avoidance of out-of-specification measurements

✓ Assurance of conformity by documented test results

✓ Improved productivity through professional user training

"The correct equipment setup and user training improve your productivity."

Equipment Qualification
Peace of Mind on Test Results

Our qualification services can help you go the extra mile to ensure your equipment is running optimally and in a safe and compliant manner. We also ensure your environment is suitable for the equipment's intended purpose and that operators are trained on equipment functions, cleaning procedures and basic diagnostics.

▸ **www.mt.com/service**

Professional equipment qualification offers you:
• Documented performance through application of standardized calibration and performance verification procedures
• Cost savings in testing thanks to optimized qualification protocols
• Expert support for test development providing confidence that the equipment consistently performs according to process requirements
• Routine operational support protecting your investment and ensuring long-term data safety and full budget control

METTLER TOLEDO Installation Pacs

Coverage	Starter Pac	IPac
Equipment Installation Documented installation using standardized procedures and operational checks	●	●
Standard System Configuration Device settings to meet your basic application requirements	●	●
User Familiarization Educational overview for operators and maintenance personnel	●	●
Installation Qualification Location and configuration log sign-off for regulated environments	●	●
Operational Qualification Functional and performance test log sign-off for regulated environments		●
Performance Qualification Comprehensive testing and documentation providing life cycle support for regulated environments		●
Documentation Documented evidence of equipment qualification	Basic	Comprehensive
Initial Calibration A variety of procedures and certificates meeting quality system, industry & regulatory requirements	Selected according to requirements	
More Information	www.mt.com/service	

Benefit from Qualification Services

Thanks to METTLER TOLEDO's equipment qualification services, you can be sure that your equipment consistently returns accurate and precise results in its dedicated working area.

Software Validation
Software validation service conducted by factory-trained service technicians provides evidence that all software requirements have been implemented correctly and completely, delivering traceable results according to your system's requirements.

Calibration & Performance
We carry out initial calibration and performance verification to confirm optimal equipment setup and fulfillment of your process requirements, standards and regulations.

Globally Accepted Protocol
Our Installation Pacs provide documentation of the original state of the equipment as well as on-going calibration and maintenance activities. This provides a complete historical data set on your equipment performance throughout the life cycle.

Preventive Maintenance
For Proven Precision and Reliability

You need to rely on your equipment; it has to be fully operational and provide correct results at all times. Your processes, equipment and documentation also have to comply with regulations. METTLER TOLEDO offers various maintenance packages to fit your specific requirements, helping you reduce costs and offering peace of mind regarding measurement quality.

▶ **www.mt.com/service**

Protect Your Equipment Against Downtime
Performance Issues and Unexpected Material Costs

Our ComprehensiveCare Package ensures maximum uptime and optimum performance at a fixed price. It gives you privileged access to our extensive expertise by offering a single solution for maintenance, consulting and reliability with full budget control. The package offers:

- Equipment inspection to help avoid unexpected downtime
- Equipment testing that confirms accuracy to ensure optimum performance
- Preferred service intervention to eliminate wait time for repairs
- Labor and spare parts coverage to ensure full cost control

Increase accuracy, reliability and process efficiency with regular maintenance from METTLER TOLEDO Service:

- ✓ Optimum equipment performance
- ✓ Reliable operating procedures
- ✓ Traceable measurement accuracy
- ✓ Proactive protection against equipment failure
- ✓ Higher testing throughput

METTLER TOLEDO Maintenance Packages

Coverage	BasicCare	StandardCare	ComprehensiveCare
Preventive Maintenance • Inspection and cleaning of all mechanical components • Inspection and testing of electronic components • Inspection for wear and damage	●	●	●
Equipment Operational Testing	●	●	●
Preferred Service Intervention	●	●	●
Discounted Repair Labor	●	●	●
Technical Hotline Access		●	●
Repair Labor Coverage in Case of Equipment Breakdown		●	●
Spare Parts Coverage			●
Calibration and Verification	Added according to your requirements and regulations		
More Information	www.mt.com/service		

"Periodic maintenance guarantees accurate measurements and optimal equipment performance."

Compliant Under Any Circumstances
With Calibration and Verification Services

You hold yourself to the highest standards of product quality. Your measurement equipment is the centerpiece of your quality system and you want to measure safely and avoid the cost and inconvenience of inaccurate measurements. You expect your measurement results, processes, equipment and documentation to meet any and all internal and external requirements.

▶ **www.mt.com/service**

METTLER TOLEDO Service knows what it takes to stay compliant. Our service offerings ensure that you can relax and focus on your operations without worrying about your measurement results. We offer a variety of calibrations, specialized calibration tools and professional certificates to help you get accurate results and pass audits at all times.
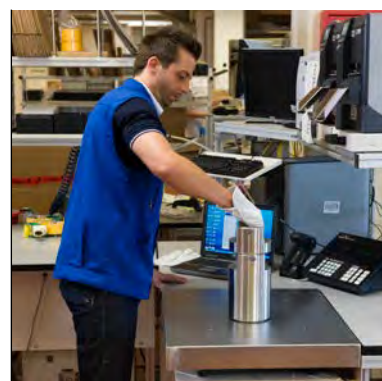
Compliance and Quality
Achieve and maintain compliance through consistent procedures and adherence to local and global regulations and standards such as; ISO 17025, EURAMET, GLP and GMP, NIST Handbook 44, OIML, and Measuring Instruments Directive (MID).

Reliable Process
The METTLER TOLEDO calibration and certification software system ensures that 100% consistent, step-by-step testing procedures for METTLER TOLEDO equipment are followed by our service technicians globally. Within this process, we generate comprehensive and fully traceable electronic certificates. These electronic certificates are stored and archived in our highly secure database.

Direct Connectivity
With the ACC, you calibrate your weighing process, not just your scale. The unique GWP Annex ensures you are always weighing in a safe range to:
• Improve product quality
• Reduce waste
• Increase productivity and profit
• Pass all internal and external audits

Be accurate and compliant with METTLER TOLEDO's calibration & certificate service:

✓ Regulatory compliance by using certified and accredited calibration procedures
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✓ Professional, easy-to-read certificates

✓ Audit-proof documentation

✓ Reliable measurement results thanks to regular instrument calibration
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✓ Avoidance of inaccurate measurements and their cost potential

"Competence in regulatory compliance helps us to pass audits."

Calibration Certificate Management
For Compliance and Beyond

Would you like to receive globally harmonized documents on service work performed on your equipment? MiraCal™, the proprietary calibration and certification system of METTLER TOLEDO, provides total consistency by guiding our service technicians through globally applicable standard operating procedures.

▶ **www.mt.com/service**

Our proprietary calibration engine generates:
- Comprehensive and audit-proof certificates
- Fully traceable electronic documentation
- Certificates retrievable on-demand from a secure database
- Optional appendices according to your requirements

Globally Standardized Procedures
All our service teams are use the same document generator to provide you with professional, standardized paperwork for installation, equipment qualification, preventive maintenance, verification and user training. In addition, this tool ensures that all technicians follow the same protocol for their work, thus ensuring uniformity independent of location and technician.
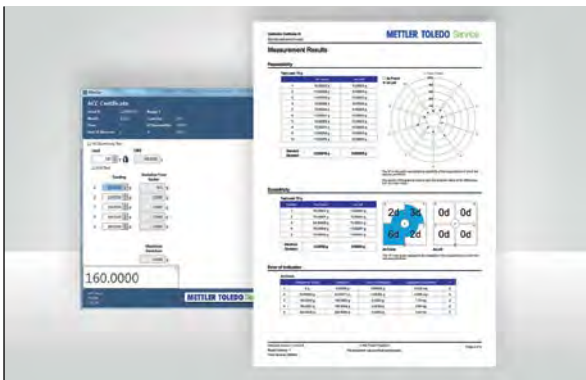
Comprehensive and Consistent Certification
METTLER TOLEDO Service provides a wide range of high-quality certificates and reports in both weighing and non-weighing categories. Our certificate competence combined with high-quality customer service ensures each certificate will be compliant with regulations.

Software-Driven Calibration Service
MiraCal™ certificates ensure accurate calculations and elimination of written errors. MiraCal guides our service technicians through defined operating procedures for calibrating both METTLER TOLEDO and third-party weighing equipment.

Traceable Information
Each calibration certificate has a unique certificate number traceable back to the calibration event and service technician. All test equipment is traceable to national or international standards.
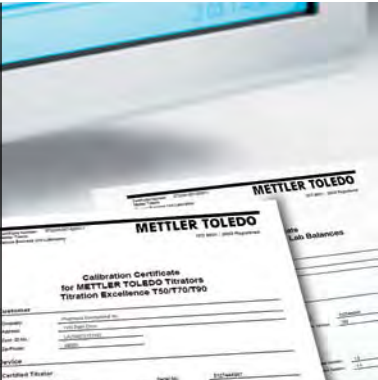
Electronically Archived Documentation
Our proprietary calibration and certification system enforces globally applicable standard testing procedures. MiraCal provides full traceability of your certificates and paperless delivery, thus significantly supporting your efforts toward achieving an environmentally sustainable workplace.

User Training and Application Support
Confidence and Know-How

Get the most out of your equipment. Our comprehensive training courses provide you with all the skills you need to use your equipment effectively on a day-to-day basis. Profita-bility, compliance, and equipment longevity are fundamental to a company's success. At METTLER TOLEDO, we believe that training plays an integral part in sustaining this process and maximizing efficiency.

▸ **www.mt.com/service**

Training Tailored to Your Needs
Our experts have developed a range of different training modules for specific equipment types and audiences to help participants gain a comprehensive understanding of their instrument and keep their processes running at maximum performance.
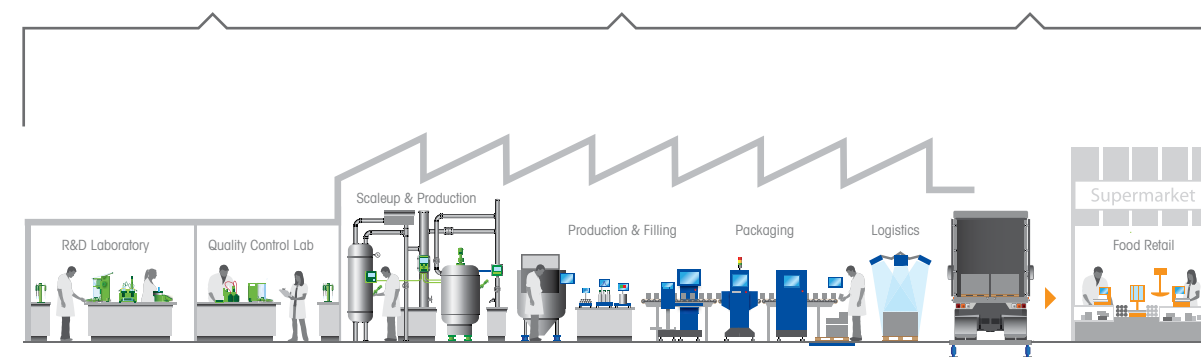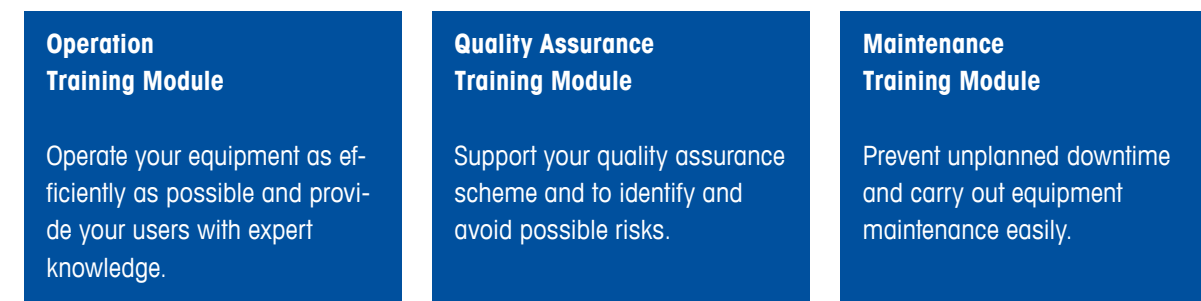
Training Module Contents:
• General introduction and technical basics
• Functional hands-on training in operational area
• Practical tests on respective systems and processes

Operation Training Module

Operate your equipment as ef-ficiently as possible and provi-de your users with expert knowledge.

Quality Assurance Training Module

Support your quality assurance scheme and to identify and avoid possible risks.

Maintenance Training Module

Prevent unplanned downtime and carry out equipment maintenance easily.

R&D Laboratory | Quality Control Lab | Scaleup & Production | Production & Filling | Packaging | Logistics | Supermarket | Food Retail

Good Measuring Practices
Five Steps to Quality Improvement

The five steps of all Good Measuring Practices programs start with an evaluation of the measurement needs of your processes and their associated risks. We also take into ac-count regulatory requirements and norms relevant to your industry. With this information, the program provides straight forward recommendations for selecting, installing, cali-brating and operating measurement equipment and devices.

▸ **www.mt.com/service**

The five steps of Good Measuring Practices cover the entire lifecycle of your equipment and deliver practical guidance for implementing optimal quality assurance measures. This may significantly reduce the total cost of ownership of your equipment while safeguarding process quality.

1 Evaluation
Analyze your process flows and their associated criteria to consistently ensure the highest quality-application and data.

2 Selection
Choose the ideal combination of instrument and measur-ing technology to best match your process needs.

3 Installation & Training
Have confidence in your new device and master it with full professional skills from day one.

4 Calibration & Qualification
Trust the manufacturer-trained METTLER TOLEDO service technicians when it comes to calibrating and qualifying your instruments.

5 Routine Operation
Benefit from tangible recommendations for optimal per-formance verification, calibration and maintenance.

Your Benefits at a Glance:
• Safe audits
• Optimized cost
• Guaranteed quality
• Minimized process risk
• Compliance with regulations
• Contribution to sustainability

Uptime – Repair and Support
Rely on the Manufacturer's Competence

Your instruments are often subject to tough environments and high utilization in critical processes. Equipment uptime is crucial to productivity. When equipment fails, immediate action is required – either onsite or at our repair center.

▶ **www.mt.com/service**

METTLER TOLEDO Service provides fast intervention to minimize downtime using proprietary tools and safe and standardized work procedures. Our repair services help you restore your equipment and gain the uptime that is critical for your productivity.

- **Onsite repair** – Fast response times from a factory-trained and certified field force using proprietary tools and original spare parts.
- **Service center repair** – Fast turnaround times for cost-effective diagnostics and repair returning equipment to factory-specifications.
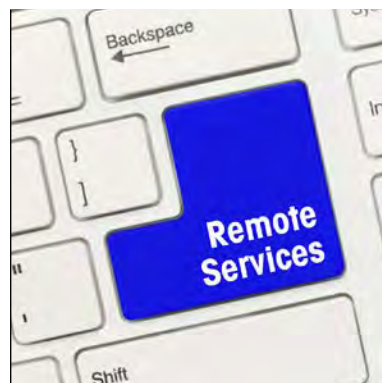
InTouch™ Remote Services
Remote services empower you to manage equipment performance more efficiently and economically. You gain:
- Quicker response to technical issues
- Increased equipment availability
- Remote diagnosis & repairs
- Product alert & alarm monitoring
- Predictive/proactive maintenance
- Equipment utilization reports

Spare Parts & Kits
Our original spare parts and kits fulfill your highest expectations for quality. You can rely on our extensive inventory to meet your needs. You gain:
- Parts factory-tested to our specifications
- The most reliable parts available
- Continuous trouble-free operation
- Ensured ongoing compliance

Manufacturer's Competence
Certified METTLER TOLEDO service technicians perform fast, reliable repair services using advanced skills, tools and original spare parts. This ensures:
- Diagnostics isolate the root error cause
- Problems fixed correctly the first time correctly the first time
- Productivity is restored

Maximize the uptime of your equipment. METTLER TOLEDO offers you:
- ✓ The largest service force in the industry
- ✓ Fast response times
- ✓ Factory trained and certified engineers
- ✓ Proprietary tools and spare parts
- ✓ Testing to factory specifications

"Fast reaction times, reliable service and highly competent technicians helped us reduce our costs significantly."

Test Weights for Unrivaled Expertise
To Meet Tough Requirements

METTLER TOLEDO is the world's leading precision instrument manufacturer. We supply innovative weight products and balance testing methods that move beyond current technology boundaries. Thanks to an established global network of accredited calibration laboratories, we also offer short turnaround for related calibration services. Our extensive portfolio covers weights from 0.05 mg to 5 tons in all accuracy classes and includes a variety of shapes for nearly any testing application.

▸ **www.mt.com/weights**

Innovation and Competence in Balance/Scale Testing to Ensure Compliance

Cost Savings from the Start

METTLER TOLEDO CarePacs® let you securely test balances of up to 8 kg capacity using just two weights – 5% and 100% of the capacity of each balance – for a significant reduction in test-weight inventory and associated maintenance and calibration costs.

Secure Traceability in Balance Testing

WeightLink™, a unique weight identification system, works with balance firmware to cross-check a test weight against its calibration certificate, making it impossible to use the wrong weight for air-tight accuracy and traceability.

Regulatory Compliance Guaranteed

Topnotch technology and comprehensive expertise position our ISO/IEC 17025-accredited calibration laboratories including our heavy-capacity lab in Béthune FR among the best in Europe.

Grip-Handle and Heavy Capacity Weights
For Safe and Efficient Scale Testing

As with laboratory balances, industrial scales and weighing platforms are also subject to regulations that ensure measurements are reliable and meet legal requirements. Regular testing with adequate test weights is essential. METTLER TOLEDO's grip-handle and heavy capacity weights are suitable for any application in all types of industrial environments. Choose the weight that best suits your needs out of our wide range of stainless steel and coated cast iron weights from a nominal value of 1 kg up to 5,000 kg. To gain traceability, documented weight calibration results are delivered in calibration certificates with details of conventional mass correction, uncertainty and traceability according to ISO/IEC 17025.

Grip-Handle Test Weights
For Safe and Convenient Scale Testing

While traditional knob weights do not allow safe stacking, cylindrical and rectangular weights assure better safety – an important aspect when testing higher-capacity balances. Grip-handle weights are available for multiple applications and environments. Choose between polished, glass bead blasted or painted weights for applications in wet, dusty, harsh or clean-room areas.

▶ **www.mt.com/industrial-weights**

Select the Right Weights

Do you know which test weights match your measuring, compliance and quality requirements? If not, request a free GWP Recommendation and Sample Verification which will give you the right weight class, calibration and routine testing frequencies with test SOPs that allow you to pass any audit.

▶ **www.mt.com/gwp-recommendation**

	OIML F1 Stainless Steel Perfect to satisfy the highest requirements in regulated industries		**OIML F2, M1 Stainless Steel** Special design ensures safe stacking and flexible loading		**OIML M1 Stainless Steel** Designed for heavy-duty operation in harsh conditions		**OIML M1-M3 Cast Iron** An economic approach for general industrial applications	
Suitable For	Official bodies, regulated and hygienically sensitive areas (e.g. GFSI, BRC, or FDA compliant)		Frequent and/or heavy duty use, all industrial areas (e.g. GFSI, BRC, or FDA compliant)		Frequent and/or heavy duty use, all industrial areas (e.g. GFSI, BRC, or FDA compliant)		Use in non-regulated and/or harsh environmental areas	
Long-Term Stability	★★★★	High gloss polishing Forged stainless steel	★★★☆	Fine-turned surface	★★★☆	Glass bead blasted and passivated surface	★★☆☆	Two-component coating
Handling Safety	★★★☆	Sturdy aluminum carrying box included	★★★★	Centering rim on top prevents weights from falling off the stack	★★★☆	Rectangular design Flat top and bottom surface	★★★☆	Milled flat top surface for easy and secure stacking
Target Load Flexibility	★★☆☆	Rectangular design Flat top and bottom surface	★★★★	Dedicated carrier for safe accumulation up to 200 kg	★★★☆	Dedicated carrier for safe accumulation up to 500 kg	★★★☆	Dedicated carrier for safe accumulation up to 500 kg
Nominal Value (kg)	1, 2, 5, 10 and 20		5, 10, 20 and 50		1, 2, 5, 10 and 20		5, 10, 20 and 50	
Tolerance MPE	OIML class F_1		OIML class F_2, M_1		OIML class M_1		OIML class M_1, M_2, M_3	
Calibration Certificate	Yes		Yes		Yes		Yes	
Material, Grade	Stainless steel, SS 304		Stainless steel, SS 303		Stainless steel, SS 304		Cast iron, EN-GJL-HB200	
Density r	7,900 kg/m^3 ± 140 kg/m^3		7,900 kg/m^3 ± 140 kg/m^3		7,900 kg/m^3 ± 140 kg/m^3		7,100 kg/m^3 ± 600 kg/m^3	
Susceptibility x	< 0.2		< 0.8		< 0.8		–	
Surface	High-gloss finish		Precision-turned finish		Glass-bead blasted, passivated		Painted (two-component coating) M_1: Pantone 648 C, M_2: Pantone 647 C, M_3: Pantone 646 C	
Adjusting Cavity	According OIML, Type 1 (Screwed sealing plug; Stainless steel)		According OIML, Type 1 (Sealing plug; tin)		According OIML, Type 1 (Sealing plug; aluminum)		According OIML, Type 2 (Sealing plug; aluminum)	
Accessories	Included: • Lockable aluminum box and nylon gloves		On request: • Plastic box • Weight carrier - Nominal value 40 kg - Stacking up to 200 kg (8 x 20 kg)		On request: • Aluminum box • Weight carrier - Nominal value 40 kg - Stacking up to 500 kg (23 x 20 kg)		On request: • Aluminum box • Weight carrier - Nominal value 40 kg - Stacking up to 500 kg (23 x 20 kg)	

Requirement fulfillment scoring: ★★★★ very good   ★★★☆ good   ★★☆☆ fair   ★☆☆☆ limited   ☆☆☆☆ none

Cast Iron Weights from 50 kg to 5 t
Top Performance through Genius Design

From many years of experience, METTLER TOLEDO knows that handling heavy capacity weights to test scales always poses certain risks. To minimize manual handling, METTLER TOLEDO has designed weights that enable safe lifting, including four-side and top access by fork lifts, cranes and hoists. This helps with safe operation and limits unnecessary costs. Your personal safety is our priority.

▶ **www.mt.com/industrial-weights**

Swiss-engineered evaporative-pattern casting technology leads to smoother surfaces than ever before. A two-component coating rejects dust and dirt and protects the weight from corrosion and scratches.
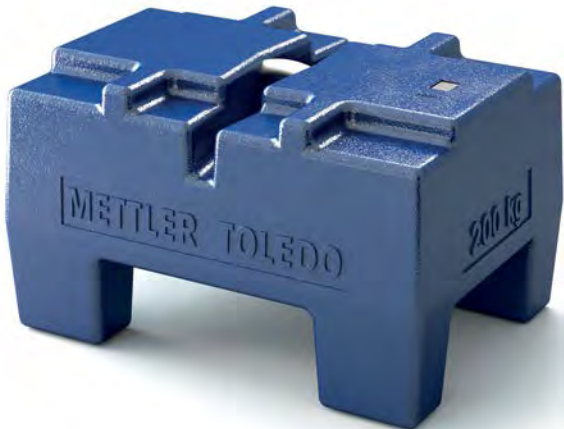
Safe Stacking
Our innovative design approach allows combining and stacking weights of different sizes. For crane lifting, straps are looped through handles-making it a "fail-safe" system.

Safe Moving and Handling
Weight dimensions fit all common pallet jacks and fork lifts and allow access from all sides. Heavy-duty, stainless steel handles facilitate the lifting of single weights or stacks by hoists and cranes.

A Cost-Cutting Approach
Weights are designed to fit on standard pick-up trucks or trailers. Lower maintenance and gas costs compared to a full-size commercial truck result in economic benefits.

Technical Specifications

Nominal Value (kg)	50, 100, 200, 500, 1,000, 2,000, 5,000
Tolerance	OIML class M1 (acc. to OIML R111-1:2004)
Calibration Certificate	Yes (COFRAC)
Material Weight	Cast iron: EN-GJL-HB200, reg. DIN EN 1561
Material Handle	Stainless steel
Density Weight	7,150 kg/m3 ± 600 kg/m3
Polarization µoM	< 250 µT
Surface	Painted (Pantone 648 C) Two-component coating
Accessories	PVC cover included, lifting straps on request

Heavy-Duty Stainless Steel Weights
Meet Strict Industry Requirements

If greater measurement accuracy or environmental compatibility are requested, as is often the case in regulated industries or testing labs, stainless steel weights are preferred. METTLER TOLEDO's heavy-capacity stainless steel weights satisfy the maximum permissible error standards for OIML classes F1 and F2 and are available in rectangular or cylindrical shapes from 100 kg up to 2,000 kg.

▸ **www.mt.com/industrial-weights**

Rectangular, heavy-capacity weights are provided with a specially designed tool for safe and precise handling. The tool is removable for space-saving storage.

Top Quality
METTLER TOLEDO puts the highest demands on the quality of its products. Each step in production is strictly controlled, from the original steel billet to the finished weight.

Impeccable Finish
A mirror-polished surface makes the weights easy to clean and provides the best possible corrosion resistance. This ensures near-perfect stability over the weight's life span.

Laser Markings
The high-specification polished stainless steel surface is marked in accordance with OIML guidelines using the latest laser technology. Customer-defined marking is also available.

Technical Specifications

	100 kg	200 kg	500 kg	1,000 kg	2,000 kg
Shape (cylindrical / rectangular)	C / R	C / R	C / R	C / R	C
Tolerance	OIML cl. F_1, F_2 (acc. To OIML R111-1:2004)				
Calibration Certificate	Yes (COFRAC)				
Material	Stainless steel				
Density ρ	$7{,}950 \text{ kg/m}^3 \pm 140 \text{ kg/m}^3$				
Susceptibility χ	< 0.2				
Polarization µOM	< 25 µT				
Surface	High-gloss finish				
Adjusting Cavity	Yes				
Accessories	Rectangular: Handling device and pvc cover included Cylindrical: Aluminum box included				

ISO 9001 registered   ISO 17025 accredited   METTLER TOLEDO   OIML

Knowledge and Tools
For Effective Solutions

METTLER TOLEDO provides a wealth of free tools and documentation about the latest techniques to optimize applications. Our website is a valuable resource for know-how and best practices.

Webinars

We offer webinars on topics ranging from process optimization to advanced measurement techniques. Presentations from academic and industry experts are available live and on-demand.

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

White Papers

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

METTLER TOLEDO White Paper portal:
▸ **www.mt.com/whitepapers**

Online Library

Our authoritative library provides industry best practices for process improvement and informed decision-making.

METTLER TOLEDO Library portal:
▸ **www.mt.com/library**

www.mt.com/industrial

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